novidea

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EDPSLink – Deep Link API

EDPS
Version 1.1

Contents

1. Document history

Version	Date	Description
1.0	15/05/2025	• Initial Version
1.1	26/05/2025	• Major changes

2. Technical design

An Android app typically has several activities. Each activity displays a user interface that lets the user perform a specific task, such as viewing a map or taking a photo. To take the user from one activity to another, your app must use an Intent to define your app's "intent" to do something.

App2App intent is designed to allow an application to communicate with the payment application effectively. The concept of the App2App intent is based on Android Intent.

2.1 Warning: Intent size limitation

> ⚠
>
> **The size of information carried by intent is limited by binder.**
>
> The Binder transaction buffer has a limited fixed size, currently **1MB**, which is shared by all transactions in progress for the process. Consequently, this exception can be thrown when there are many transactions in progress even when most of the individual transactions are of moderate size.
>
> There are two possible outcomes when a remote procedure call throws **TransactionTooLargeException**. Either the client was unable to send its request to the service (most likely if the arguments were too large to fit in the transaction buffer), or the service was unable to send its response back to the client (most likely if the return value was too large to fit in the transaction buffer). It is not possible to tell which of these outcomes occurred. The client should assume that a partial failure occurred.
>
> The upper limit may be different for different models and system versions.

2.2 Warning: android:launchMode on AndroidManifest.xml

> ⚠
>
> **The launchMode of activity should be in standard mode.**
>
> Setting launchMode to "standard" ensures that the Activity operates independently and maintains its own instance.
>
> This prevents the loss of activity results since each instance of the Activity remains intact regardless of the state of other activities in the task stack. It's particularly useful when dealing with activities that rely heavily on user interactions and expect to receive results from other activities, as it ensures consistent behavior and proper handling of **onActivityResult()** calls.
>
> If activity has the **android:launchMode="singleTop"** may lose the results of App2App intent.

3. Software

3.1 Architecture Concept

Each business use case below shows the JSON parameter structure used to pass the data inside an Intent. The individual elements within a JSON (JavaScript Object Notation) structure are typically referred to as "JSON objects" or "JSON data objects." Each object consists of key-value pairs, where the key is a string and the value can be a string, number, boolean, array, another JSON object, or null.

```kotlin
 1. private val startSale =
 2.        registerForActivityResult(ActivityResultContracts.StartActivityForResult())
{ result: ActivityResult ->
 3.            val resultData = result.data?.getStringExtra("gr.edps.nbgtom.RESULT")
 4.            Log.i("TestClass", "ResultData=[${resultData}]")
 5.        }
 6.
 7.    fun executeTestCall() {
 8.        val requestJson =
"{\"operation\":\"SALE\",\"data\":{\"transaction\":{\"amount\":100}}}"
 9.
10.        val intent = Intent("gr.edps.nbgtom.NBGTOM").apply {
11.      putExtra("gr.edps.nbgtom.REQUEST", requestJson)
12.        }
13.        intent.resolveActivity(context.packageManager)?.let {
14. startSale.launch(it, ActivityOptionsCompat.makeBasic())
15.        }
16.    }
17.
```

3.2 References

ID	Description
O	The corresponding field is optional
M	The corresponding field is mandatory

3.3 Sale Operation

An example **request** of a sale transaction is depicted below:

```
1.  {
3.      "operation":"SALE",
4.      "version":1,
5.      "data":{
6.          "transaction":{
7.              "amount":124,
8.              "tip":0
9.          },
10.         "properties":{
11.             "language":"el"
12.         }
13.     }
14. }
```

Object	Format	Type	Description
operation	string	M	Refers to the type of operation taking place. The list of operations is as follows: • "**SALE**": Make a payment transaction, • "**CANCEL**": Return the amount issued for a not- settled payment transaction to the customer. If the transaction being cancelled is the last that has taken place, then the reversal behavior will be triggered, • "**REFUND**": Return the amount issued for a settled payment transaction to the customer. In the current scope, **"SALE"** is the operation that must take place.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.
data	JSON object	M	The object "data" is comprised of the JSON objects "**transaction**" and "**properties**".
transaction	JSON object	M	It is a JSON object that is comprised of the following fields: • **amount** • **tip**

			• **installments**
amount	number	M	Refers to the amount of the transaction.
tip	number	O	Refers to the tip amount of the transaction. (The field of amount does not include the one of tip.)
installments	number	O	Refers to the number of installments of payments. *For future use
properties	JSON object	O	It is a JSON object that is comprised of the following fields: • **language** • **printReceipt**
language	string	O	Refers to the language in which the app will be displayed. The value "**el**" is used for the Greek language, while the value "**en**" is used for the English one. The default value is set to "**el**"
printReceipt	boolean	O	***For future use**

An example **response** of a sale transaction is depicted below:

```
1.  {
2.      "requestId":"43e0048b-e614-4a66-94b9-207519f6d899",
3.      "operation":"SALE",
4.      "version":1,
5.      "result":"0",
6.      "data":{
7.          "transactionId":"4c9a5193-4a4d-4b7f-b842-501315a7beb4",
8.          "createdTime":1706788954362,
9.          "cardData":{
10.             "captureType":"ICC",
11.             "type":"VISA",
12.             "cardNumber":"**** **** **** 3842"
13.         },
14.         "transactionData":{
15.             "type":"SALE",
16.             "amount":100,
17.             "tip":0,
18.             "totalAmount":100,
19.             "batchNo":1,
20.             "sequenceNo":100000000123,
21.             "referenceNo":"0000001",
22.             "authorizationCode":"303030"
23.         },
24.         "merchantData":{
25.             "mid":"E000000101",
26.             "tid":"01234001",
27.             "merchantName":"Name"
28.         },
29.         "applicationData":{
30.             "appVersion":"1.0.0"
31.         }
32.     }
33. }
```

Object	Format	Type	Description
operation	string	M	It refers to the type of operation taking place. The list of operations is as follows: • "**SALE**": Make a payment transaction, • "**CANCEL**": Return the amount issued for a not- settled payment transaction to the customer. If the transaction being cancelled is the last that has taken place, then the reversal behavior will be triggered, • "**REFUND**": Return the amount issued for a settled payment transaction to the customer.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions.

			If the version provided is higher than the one in force, then the request will be declined.
result	string	M	It refers to the result of the transaction that has taken place. The value "**0**" indicates that the transaction has been **approved**. Any other value suggests that the transaction has been declined.
data	JSON object	M	It is a JSON object that is comprised of the following fields: • **transactionId** • **createdTime** • **cardData** • **transactionData** • **merchantData** • **applicationData**
transactionId	string	M	It refers to the **ID** of the original transaction (Sale, or Refund).
createdTime	number	M	It refers to the **time** that the transaction has taken place.
cardData	JSON object	M	It is a JSON object that is comprised of the following fields: • **captureType** • **type** • **cardNumber**
captureType	string	O	It refers to the card entry type and can have the following values: • **MANUAL**, • **ICC** (chip)**,** • **CTLS** (contactless), • **MAG** (magstripe)
type	string	O	It refers to the card type name and can have the following values: • **VISA**, • **MASTER** • **AMEX** • **DISCOVERY**
cardNumber	string	O	It refers to the number of the card, after it has undergone a process of masking. The part of the

			car number that is displayable is up to 3rd party systems.
transactionData	JSON object	M	It is a JSON object that is comprised of the following fields: • **type** • **amount** • **tip** • **totalAmount** • **installments** • **batchNo** • **sequenceNo** • **referenceNo** • **authorizationCode**
type	string	M	It refers to the type of the original transaction that has taken place. More specifically, if the transaction taking place is a Sale, then the type will be "SALE" as well. In the case of a Cancellation, then the type will display the type of the original transaction, e.g. "SALE" or "REFUND".
amount	number	M	It refers to the original amount of the transaction.
tip	number	O	It refers to the tip amount of the transaction. (The field of amount does not include the one of tip.)
totalAmount	number	M	It refers to the amount that is calculated after adding the **tip** to the **amount**
installments	number	O	It refers to the number of installments of payments. *For future use
batchNo	number	M	It refers to the number of the batch in which the transaction has taken place.
sequenceNo	number	M	It refers to the number in which the transaction has taken place in the batch, e.g. the first transaction is 1, the second transaction is 2 and so forth.
referenceNo	string	O	It refers to the host approved reference number.
authorizationCode	string	M	It refers to the **authorization response code** provided by the issuer of the payment card to the merchant.
merchantData	JSON object	M	It is a JSON object that is comprised of the following fields: • **mid** • **tid**

			• **merchantName**
mid	string	M	It indicates the merchant's **ID**.
tid	string	M	It indicates the terminal's **ID**.
merchantName	string	O	It indicates the merchant's **name**.
applicationData	JSON object	M	It is a JSON object that is comprised of the following field: • **appVersion.**
appVersion	string	M	It indicates the current **version** of the application.

3.4 Sale Operation with Provider Signature

An example **request** of a sale transaction with Provider Signature is depicted below:

```
1.  {
2.    "operation":"SALE",
3.    "version":1,
4.    "data":{
5.    "transaction":{
6.     "amount":124,
7.     "tip":0
8.    },
9.    "properties":{
10.    "language":"el"
11.    },
12.    "aade":{
13.    "isRestaurant":false,
14.    "provider":{
15.     "id":"002",
16. "input":"7AD33729F4ED749928AAFA00B90EE4EA91551BAC1;;20231204080313;124;100;24;124;TID123456",
17. "signature":"MEQCIF0PK1+WkEkCwk8CnzcDvA3UR4hGdKtogWHsCHZ6ssuGAiB4GIZCz+zS1ua92uJQ9R+/tQETbrd1lXWEEIj61g2GFw=="
18.      }
19.    }
20.   }
21.  }
```

Object	Format	Type	Description
operation	string	M	Refers to the type of operation taking place. The list of operations is as follows: • "**SALE**": Make a payment transaction, • "**CANCEL**": Return the amount issued for a not- settled payment transaction to the customer. If the transaction being cancelled is the last that has taken place, then the reversal behavior will be triggered, • "**REFUND**": Return the amount issued for a settled payment transaction to the customer. In the current scope, **"SALE"** is the operation that must take place.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.

data	JSON object	M		The object "data" is comprised of the JSON objects "**transaction**", "**properties**" and "**aade**".
transaction	JSON object	M		It is a JSON object that is comprised of the following fields: • **amount** • **tip** • **installments**
amount	number	M		Refers to the amount of the transaction.
tip	number	O		Refers to the tip amount of the transaction. (The field of amount does not include the one of tip.)
installments	number	O		Refers to the number of installments of payments. *For future use
properties	JSON object	O		It is a JSON object that is comprised of the following fields: • **language** • **printReceipt**
language	string	O		Refers to the language in which the app will be displayed. The value "**el**" is used for the Greek language, while the value "**en**" is used for the English one. The default value is set to "**el**"
printReceipt	boolean	O		***For future use**
aade	JSON object	M		It is a JSON object that is comprised of the following fields: • **isRestaurant** • **provider**
isRestaurant				Refers to the place that the transaction took place. If values is **true,** then the transaction must be at most 2 hours before completion. If values if **false,** then the transaction must be at most 24 hour before completion. In case any condition fails, transaction will be considered expired.
provider	JSON object	M		It is a JSON object that is comprised of the following fields: • **id** • **input** • **signature**

id	string	M	The id of the electronic invoicing provider signature. It must be in the same format as Tax Authorities' "**provider_id**"
input	string	M	It contains the fields as described in the A1155. The format must strictly follow the order and format as: **Uid;Mark;Datetime;PayableAmount;NetAmount;** **VatAmount;TotalAmount;TID**
signature	string	M	The electronic invoicing provider signature.

An example **response** of a sale transaction with Provider Signature is depicted below:

```
1.  {
3.      "operation":"SALE",
4.      "version":1,
5.      "result":"0",
6.      "data":{
7.          "transactionId":"4c9a5193-4a4d-4b7f-b842-501315a7beb4",
8.          "createdTime":1706788954362,
9.          "cardData":{
10.             "captureType":"ICC",
11.             "type":"VISA",
12.             "cardNumber":"**** **** **** 3842"
13.         },
14.         "transactionData":{
15.             "type":"SALE",
16.             "amount":124,
17.             "tip":0,
18.             "totalAmount":124,
19.             "batchNo":1,
20.             "sequenceNo":100000000123,
21.             "referenceNo":"0000001",
22.             "authorizationCode":"303030"
23.         },
24.         "merchantData":{
25.             "mid":"E000000101",
26.             "tid":"01234001",
27.             "merchantName":"Name"
28.         },
29.         "applicationData":{
30.             "appVersion":"1.0.0"
31.         }
40.     }
41. }
```

Object	Format	Type	Description
operation	string	M	It refers to the type of operation taking place. The list of operations is as follows: • "**SALE**": Make a payment transaction, • "**CANCEL**": Return the amount issued for a not- settled payment transaction to the customer. If the transaction being

			cancelled is the last that has taken place, then the reversal behavior will be triggered, • **"REFUND"**: Return the amount issued for a settled payment transaction to the customer.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.
result	string	M	It refers to the result of the transaction that has taken place. The value "**0**" indicates that the transaction has been **approved**. Any other value suggests that the transaction has been declined.
data	JSON object	M	It is a JSON object that is comprised of the following fields: • **transactionId** • **createdTime** • **cardData** • **transactionData** • **merchantData** • **applicationData**
transactionId	string	M	It refers to the **ID** of the original transaction (Sale, or Refund).
createdTime	number	M	It refers to the **time** that the transaction has taken place.
cardData	JSON object	M	It is a JSON object that is comprised of the following fields: • **captureType** • **type** • **cardNumber**
captureType	string	O	It refers to the card entry type and can have the following values: • **MANUAL**, • **ICC** (chip)**,** • **CTLS** (contactless),

			• **MAG** (magstripe)
type	string	O	It refers to the card type name and can have the following values: • **VISA**, • **MASTER** • **AMEX** • **DISCOVERY**
cardNumber	string	O	It refers to the number of the card, after it has undergone a process of masking. The part of the car number that is displayable is up to 3rd party systems.
transactionData	JSON object	M	It is a JSON object that is comprised of the following fields: • **type** • **amount** • **tip** • **totalAmount** • **installments** • **batchNo** • **sequenceNo** • **referenceNo** • **authorizationCode**
type	string	M	It refers to the type of the original transaction that has taken place. More specifically, if the transaction taking place is a Sale, then the type will be "SALE" as well. In the case of a Cancellation, then the type will display the type of the original transaction, e.g. "SALE" or "REFUND".
amount	number	M	It refers to the original amount of the transaction.
tip	number	O	It refers to the tip amount of the transaction. (The field of amount does not include the one of tip.)
totalAmount	number	M	It refers to the amount that is calculated after adding the **tip** to the **amount**
installments	number	O	It refers to the number of installments of payments. *For future use
batchNo	number	M	It refers to the number of the batch in which the transaction has taken place.
sequenceNo	number	M	It refers to the number in which the transaction has taken place in the batch, e.g. the first

			transaction is 1, the second transaction is 2 and so forth.
referenceNo	string	O	It refers to the host approved reference number.
authorizationCode	string	M	It refers to the **authorization response code** provided by the issuer of the payment card to the merchant.
merchantData	JSON object	M	It is a JSON object that is comprised of the following fields: • **mid** • **tid** • **merchantName**
mid	string	M	It indicates the merchant's **ID**.
tid	string	M	It indicates the terminal's **ID**.
merchantName	string	O	It indicates the merchant's **name**.
applicationData	JSON object	M	It is a JSON object that is comprised of the following field: • **appVersion.**
appVersion	string	M	It indicates the current **version** of the application.

3.5 Refund Operation with Provider Signature

An example **request** of a refund transaction with Provider Signature is depicted below:

```
1.  {
3.    "operation":"REFUND",
4.    "version":1,
5.    "data":{
6.      "originalTransaction":{
7.        "transactionId":"4c9a5193-4a4d-4b7f-b842-501315a7beb4"
8.      },
9.      "properties":{
10.       "language":"el"
11.     },
12.     "aade":{
13.       "isRestaurant":false,
14.       "provider":{
15.         "id":"002",
16.
"input":"7AD33729F4ED749928AAFA00B90EE4EA91551BAC1;;20231204080313;124;100;24;124;TID123
456",
17.
"signature":"MEQCIF0PK1+WkEkCwk8CnzcDvA3UR4hGdKtogWHsCHZ6ssuGAiB4GIZCz+zS1ua92uJQ9R+/tQE
Tbrd1lXWEEIj61g2GFw=="
18.       }
19.     }
20.   }
21. }
22.
```

Object	Format	Type	Description
operation	string	M	Refers to the type of operation taking place. The list of operations is as follows: • "**SALE**": Make a payment transaction, • "**CANCEL**": Return the amount issued for a not- settled payment transaction to the customer. If the transaction being cancelled is the last that has taken place, then the reversal behavior will be triggered, • "**REFUND**": Return the amount issued for a settled payment transaction to the customer. In the current scope, **"REFUND"** is the operation that must take place.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.

data	JSON object	M	The object "data" is comprised of the JSON objects "**originalTransaction**", "**properties**" and "**aade**".
originalTransaction	JSON object	M	It is a JSON object that is comprised of the following fields: • **transactionId**
transactionId	string	M	Refers to transaction ID of the initial transaction that must be refunded.
properties	JSON object	O	It is a JSON object that is comprised of the following fields: • **language** • **printReceipt**
language	string	O	Refers to the language in which the app will be displayed. The value "**el**" is used for the Greek language, while the value "**en**" is used for the English one. The default value is set to "**el**"
printReceipt	boolean	O	***For future use**
aade	JSON object	M	It is a JSON object that is comprised of the following fields: • **isRestaurant** • **provider**
isRestaurant			Refers to the place that the transaction took place. If values is **true,** then the transaction must be at most 2 hours before completion. If values if **false,** then the transaction must be at most 24 hour before completion. In case any condition fails, transaction will be considered expired.
provider	JSON object	O	It is a JSON object that is comprised of the following fields: • **id** • **input** • **signature**
id	string	M	The id of the electronic invoicing provider signature. It must be in the same format as Tax Authorities' "**provider_id**"

input	string	M	It contains the fields as described in the A1155. The format must strictly follow the order and format as: **Uid;Mark;Datetime;PayableAmount;NetAmount;** **VatAmount;TotalAmount;TID**
signature	string	M	The electronic invoicing provider signature.

An example **response** of a refund transaction with Provider Signature is depicted below:

```
1. {
3.     "operation":"REFUND",
4.     "version":1,
5.     "result":"0",
6.     "data":{
7.         "transactionId":"4c9a5193-4a4d-4b7f-b842-501315a7beb4",
8.         "createdTime":1706788954362,
9.         "cardData":{
10.             "captureType":"ICC",
11.             "type":"VISA",
12.             "cardNumber":"**** **** **** 3842"
13.         },
14.         "transactionData":{
15.             "type":" REFUND ",
16.             "amount":124,
17.             "tip":0,
18.             "totalAmount":124,
19.             "batchNo":1,
20.             "sequenceNo":100000000123,
21.             "referenceNo":"0000001",
22.             "authorizationCode":"303030"
23.         },
24.         "merchantData":{
25.             "mid":"E000000101",
26.             "tid":"01234001",
27.             "merchantName":"Name"
28.         },
29.         "applicationData":{
30.             "appVersion":"1.0.0"
31.         }
40.     }
41. }
```

Object	Format	Type	Description
operation	string	M	It refers to the type of operation taking place. The list of operations is as follows: • "**SALE**": Make a payment transaction, • "**CANCEL**": Return the amount issued for a not- settled payment transaction to the customer. If the transaction being cancelled is the last that has taken place, then the reversal behavior will be triggered,

			• "**REFUND**": Return the amount issued for a settled payment transaction to the customer.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.
result	string	M	It refers to the result of the transaction that has taken place. The value "**0**" indicates that the transaction has been **approved**. Any other value suggests that the transaction has been declined.
data	JSON object	M	It is a JSON object that is comprised of the following fields: • **transactionId** • **createdTime** • **cardData** • **transactionData** • **merchantData** • **applicationData**
transactionId	string	M	It refers to the **ID** of the original transaction (Sale, or Refund).
createdTime	number	M	It refers to the **time** that the transaction has taken place.
cardData	JSON object	M	It is a JSON object that is comprised of the following fields: • **captureType** • **type** • **cardNumber**
captureType	string	O	It refers to the card entry type and can have the following values: • **MANUAL**, • **ICC** (chip)**,** • **CTLS** (contactless), • **MAG** (magstripe)

type	string	O	It refers to the card type name and can have the following values: • **VISA**, • **MASTER** • **AMEX** • **DISCOVERY**
cardNumber	string	O	It refers to the number of the card, after it has undergone a process of masking. The part of the car number that is displayable is up to 3rd party systems.
transactionData	JSON object	M	It is a JSON object that is comprised of the following fields: • **type** • **amount** • **tip** • **totalAmount** • **installments** • **batchNo** • **sequenceNo** • **referenceNo** • **authorizationCode**
type	string	M	It refers to the type of the original transaction that has taken place. More specifically, if the transaction taking place is a Sale, then the type will be "SALE" as well. In the case of a Cancellation, then the type will display the type of the original transaction, e.g. "SALE" or "REFUND".
amount	number	M	It refers to the original amount of the transaction.
tip	number	O	It refers to the tip amount of the transaction. (The field of amount does not include the one of tip.)
totalAmount	number	M	It refers to the amount that is calculated after adding the **tip** to the **amount**
installments	number	O	It refers to the number of installments of payments. *For future use*
batchNo	number	M	It refers to the number of the batch in which the transaction has taken place.
sequenceNo	number	M	It refers to the number in which the transaction has taken place in the batch, e.g. the first transaction is 1, the second transaction is 2 and so forth.

referenceNo	string	O	It refers to the host approved reference number.
authorizationCode	string	M	It refers to the **authorization response code** provided by the issuer of the payment card to the merchant.
merchantData	JSON object	M	It is a JSON object that is comprised of the following fields: • **mid** • **tid** • **merchantName**
mid	string	M	It indicates the merchant's **ID**.
tid	string	M	It indicates the terminal's **ID**.
merchantName	string	O	It indicates the merchant's **name**.
applicationData	JSON object	M	It is a JSON object that is comprised of the following field: • **appVersion.**
appVersion	string	M	It indicates the current **version** of the application.

3.6 Cancel (Void) Operation

An example **request** of a transaction cancellation is depicted below:

```
1. {
3.    "operation":"CANCEL",
4.    "version":1,
5.    "data":{
6.       "originalTransaction":{
7.          "transactionId":"4c9a5193-4a4d-4b7f-b842-501315a7beb4"
8.       },
9.       "properties":{
10.          "language":"el"
11.       }
12.    }
13. }
14.
```

Object	Format	Type	Description
operation	string	M	Refers to the type of operation taking place. In this case the operation is "**CANCEL**", which corresponds to the returning of the amount issued for a not- settled payment transaction to the customer. If the transaction being cancelled is the last that has taken place, then the reversal behavior will be triggered.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.
data	JSON object	M	It is a JSON object that is comprised of the following fields: • **originalTransaction** • **properties**
originalTransaction	JSON object	M	It is a JSON object that is comprised of the following field: • **transactionId**
transactionId	string	M	It refers to the **ID** of the original transaction (Sale, or Refund).
properties	JSON object	O	It is a JSON object that is comprised of the following fields: • **language**
language	string	O	Refers to the language in which the app will be displayed. The value "**el**" is used for the Greek language, while the value "**en**" is used for the English one. The default value is set to "**el**"

An example **response** of a transaction cancellation is depicted below:

```
1. {
3.      "operation":"CANCEL",
4.      "version":1,
5.      "result":"0",
6.      "data":{
7.          "transactionId":"4c9a5193-4a4d-4b7f-b842-501315a7beb4",
8.          "createdTime":1706788954362,
9.          "cardData":{
10.             "captureType":"ICC",
11.             "type":"VISA",
12.             "cardNumber":"**** **** **** 3842"
13.         },
14.         "transactionData":{
15.             "type":"VOID",
16.             "amount":100,
17.             "tip":0,
18.             "totalAmount":100,
19.             "batchNo":1,
20.             "sequenceNo":100000000123,
21.             "referenceNo":"0000001",
22.             "authorizationCode":"303030"
23.         },
24.         "merchantData":{
25.             "mid":"E000000101",
26.             "tid":"01234001",
27.             "merchantName":"Name"
28.         },
29.         "applicationData":{
30.             "appVersion":"1.0.0"
31.         }
32.     }
33. }
```

Object	Format	Type	Description
operation	string	M	It refers to the type of operation taking place. The list of operations is as follows: • "**SALE**": Make a payment transaction, • "**CANCEL**": Return the amount issued for a not- settled payment transaction to the customer. If the transaction being cancelled is the last that has taken place, then the reversal behavior will be triggered, • "**REFUND**": Return the amount issued for a settled payment transaction to the customer.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.

result	string	M	It refers to the result of the transaction that has taken place. The value "**0**" indicates that the transaction has been **approved**. Any other value suggests that the transaction has been declined.
data	JSON object	M	It is a JSON object that is comprised of the following fields: • **transactionId** • **createdTime** • **cardData** • **transactionData** • **merchantData** • **applicationData**
transactionId	string	M	It refers to the **ID** of the original transaction (Sale, or Refund).
createdTime	number	M	It refers to the **time** that the transaction has taken place.
cardData	JSON object	M	It is a JSON object that is comprised of the following fields: • **captureType** • **typ** • **cardNumber**
captureType	string	O	It refers to the card entry type and can have the following values: • **MANUAL**, • **ICC** (chip)**,** • **CTLS** (contactless), • **MAG** (magstripe)
type	string	O	It refers to the card type name and can have the following values: • **VISA**, • **MASTER** • **AMEX** • **DISCOVERY**
cardNumber	string	M	It refers to the number of the card, after it has undergone a process of masking. The part of the car number that is displayable is up to 3rd party systems.

transactionData	JSON object	O	It is a JSON object that is comprised of the following fields: • **type** • **amount** • **tip** • **totalAmount** • **installments** • **batchNo** • **sequenceNo** • **referenceNo** • **authorizationCode**
type	string	M	It refers to the type of the original transaction that has taken place. More specifically, if the transaction taking place is a Sale, then the type will be "SALE" as well. In the case of a Cancellation, then the type will display the type of the original transaction, e.g. "SALE" or "REFUND".
amount	number	M	It refers to the original amount of the transaction.
tip	number	O	It refers to the tip amount of the transaction. (The field of amount does not include the one of tip.)
totalAmount	number	M	It refers to the amount that is calculated after adding the **tip** to the **amount**
installments	number	O	It refers to the number of installments of payments. ***For future use**
batchNo	number	M	It refers to the number of the batch in which the transaction has taken place.
sequenceNo	number	M	It refers to the number in which the transaction has taken place in the batch, e.g. the first transaction is 1, the second transaction is 2 and so forth.
referenceNo	string	O	It refers to the host approved reference number.
authorizationCode	string	M	It refers to the **authorization response code** provided by the issuer of the payment card to the merchant.
merchantData	JSON object	M	It is a JSON object that is comprised of the following fields: • **mid** • **tid** • **merchantName**

mid	string	M	It indicates the merchant's **ID**.
tid	string	M	It indicates the terminal's **ID**.
merchantName	string	O	It indicates the merchant's **name**.
applicationData	JSON object	M	It is a JSON object that is comprised of the following field: • **appVersion**
appVersion	string	M	It indicates the current **version** of the application.

3.7 Transaction Details Operation

An example **request** of transaction details is depicted below:

```
1. {
2.    "operation":"TRANSACTION_DETAILS",
3.    "version":1,
4.    "data":{
5.       "originalTransaction":{
7.          "transactionId":"3db2514f-e55d-4895-b595-34134d586603"
8.       }
9.    }
10. }
11.
```

Object	Format	Type	Description
operation	string	M	Refers to the type of operation taking place. In this case the operation is "**TRANSACTION_DETAILS**", which corresponds to the getting details of transaction that is stored in Payment.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.
data	JSON object	M	It is a JSON object that is comprised of the following fields: • **originalTransaction**

originalTransaction	JSON object	M	It is a JSON object that is comprised of the following field: • **transactionId**
transactionId	string	M	It refers to the **ID** of the original transaction (Sale, Cancel, or Refund).

An example **response** of transaction details is depicted below:

```
1. {
3.     "operation":"TRANSACTION_DETAILS ",
4.     "version":1,
5.     "result":"0",
6.     "data":{
7.         "transactionId":"4c9a5193-4a4d-4b7f-b842-501315a7beb4",
8.         "createdTime":1706788954362,
9.         "cardData":{
10.            "captureType":"ICC",
11.            "type":"VISA",
12.            "cardNumber":"**** **** **** 3842"
13.        },
14.        "transactionData":{
15.            "type":"VOID",
16.            "amount":100,
17.            "tip":0,
18.            "totalAmount":100,
19.            "batchNo":1,
20.            "sequenceNo":100000000123,
21.            "referenceNo":"0000001",
22.            "authorizationCode":"303030"
23.        },
24.        "merchantData":{
25.            "mid":"E000000101",
26.            "tid":"01234001",
27.            "merchantName":"Name"
28.        },
29.        "applicationData":{
30.            "appVersion":"1.0.0"
31.        }
32.    }
33. }
```

Object	Format	Type	Description
operation	string	M	Refers to the type of operation taking place. In this case the operation is "**TRANSACTION_DETAILS**", which corresponds to the getting details of transaction that is stored in Payment.
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur

			because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.
result	string	M	It refers to the result of the transaction that has taken place. The value "**0**" indicates that the transaction has been **approved**. Any other value suggests that the transaction has been declined.
data	JSON object	M	It is a JSON object that is comprised of the following fields: • **transactionId** • **createdTime** • **cardData** • **transactionData** • **merchantData** • **applicationData**
transactionId	string	M	It refers to the **ID** of the original transaction (Sale, or Refund).
createdTime	number	M	It refers to the **time** that the transaction has taken place.
cardData	JSON object	M	It is a JSON object that is comprised of the following fields: • **captureType** • **type** • **cardNumber**
captureType	string	O	It refers to the card entry type and can have the following values: • **MANUAL**, • **ICC** (chip)**,** • **CTLS** (contactless), • **MAG** (magstripe)
type	string	O	It refers to the card type name and can have the following values: • **VISA**, • **MASTER** • **AMEX** • **DISCOVERY**

cardNumber	string	M	It refers to the number of the card, after it has undergone a process of masking. The part of the car number that is displayable is up to 3rd party systems.
transactionData	JSON object	M	It is a JSON object that is comprised of the following fields: • **type** • **amount** • **tip** • **totalAmount** • **installments** • **batchNo** • **sequenceNo** • **referenceNo** • **authorizationCode**
type	string	M	It refers to the type of the original transaction that has taken place. More specifically, if the transaction taking place is a Sale, then the type will be "SALE" as well. In the case of a Cancellation, then the type will display the type of the original transaction, e.g. "SALE" or "REFUND".
amount	number	M	It refers to the original amount of the transaction.
tip	number	M	It refers to the tip amount of the transaction. (The field of amount does not include the one of tip.)
totalAmount	number	M	It refers to the amount that is calculated after adding the **tip** to the **amount**
installments	number	O	It refers to the number of installments of payments. *__For future use__
batchNo	number	M	It refers to the number of the batch in which the transaction has taken place.
sequenceNo	number	M	It refers to the number in which the transaction has taken place in the batch, e.g. the first transaction is 1, the second transaction is 2 and so forth.
referenceNo	string	O	It refers to the host approved reference number.
authorizationCode	string	M	It refers to the **authorization response code** provided by the issuer of the payment card to the merchant.
merchantData	JSON object	M	It is a JSON object that is comprised of the following fields:

			• **mid**
			• **tid**
			• **merchantName**
			•
mid	string	M	It indicates the merchant's **ID**.
tid	string	M	It indicates the terminal's **ID**.
merchantName	string	O	It indicates the merchant's **name**.
applicationData	JSON object	M	It is a JSON object that is comprised of the following field: • **appVersion.**
appVersion	string	M	It indicates the current **version** of the application.

3.8 Close Batch Operation

An example **request** of close batch is depicted below:

```
1. {
2.    "operation":"CLOSE_BATCH",
3.    "version":1
4. }
5.
```

Object	Format	Type	Description
operation	string	M	Refers to the type of operation taking place. In this case the operation is "**CLOSE_BATCH**", which corresponds to the settlement of an open batch
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.

An example **response** of a close batch is depicted below:

```
1. {
2.    "operation":"CLOSE_BATCH",
3.    "version":1,
4.    "result":"-3",
5.    "data":{
6.       "createdTime":1712061795366,
7.       "batchData": {
8.        "batchNo": 1,
9.        "batchTotals": "00100000000000010000000000000000000000000000000000000000000000
10.       },
11.       "merchantData":{
12.          "mid":"E000000101",
13.          "tid":"01234001",
14.          "merchantName":"Name"
15.       },
16.       "applicationData":{
17.           "appVersion":"1.0.0"
18.       }
19.    }
20. }
21.
```

Object	Format	Type	Description
operation	string	M	Refers to the type of operation taking place. In this case the operation is "**CLOSE_BATCH**", which corresponds to the settlement batch of an open batch
version	number	M	This field is crucial for identifying the version of deeplink being used. It is used to eliminate any inconsistencies or conflicts that may occur because of the changes implemented between versions. If the version provided is higher than the one in force, then the request will be declined.
result	string	M	It refers to the result of the transaction that has taken place. The value "**-3**" indicates that the batch closed **successfully**. Any other value suggests that the batch failed to close.
data	JSON object	M	It is a JSON object that is comprised of the following fields: • **transactionId** • **createdTime** • **cardData** • **transactionData** • **merchantData** • **applicationData**

createdTime	number	M	It refers to the **time** that the transaction has taken place.
batchData	JSON object	M	It is a JSON object that is comprised of the following fields: • **batchNo** • **batchTotals**
batchNo	string	O	It refers to the number of the batch that has been closed (settled)
batchTotals	string	O	It refers to the totals of the batch that has been closed. See the example below for more information.
merchantData	JSON object	M	It is a JSON object that is comprised of the following fields: • **mid** • **tid** • **merchantName** •
mid	string	M	It indicates the merchant's **ID**.
tid	string	M	It indicates the terminal's **ID**.
merchantName	string	M	It indicates the merchant's **name**.
applicationData	JSON object	M	It is a JSON object that is comprised of the following field: • **appVersion.**
appVersion	string	M	It indicates the current **version** of the application.

3.8.1   Example of Close Batch totals

Let's consider the following response of 'batchTotals':
02100000000209000100000000010000100000000010000000000000000
The structure consists of the following parts:
021000000002090**001**000000000100**001**000000000100**000**000000000000

Sales count: 021
Sales summary (in cents): 000000002090
Cancellations count: 001
Cancellations summary (in cents): 000000000100
Refunds count: 001
Refunds summary (in cents): 000000000100
Void refunds count: 000
Void refunds summary (in cents): 000000000000

4. Error codes tables

4.1 App2App error codes table

Error code	Description
30000	Action is invalid
30001	Operation request is invalid
30002	Extra request key is empty
30003	JSON is malformed
30011	Transaction amount is negative or zero
30012	Transaction tip amount is negative or zero
30013	Transaction with tip is not supported
30015	General error
30016	Signature is invalid
30017	Signature has expired