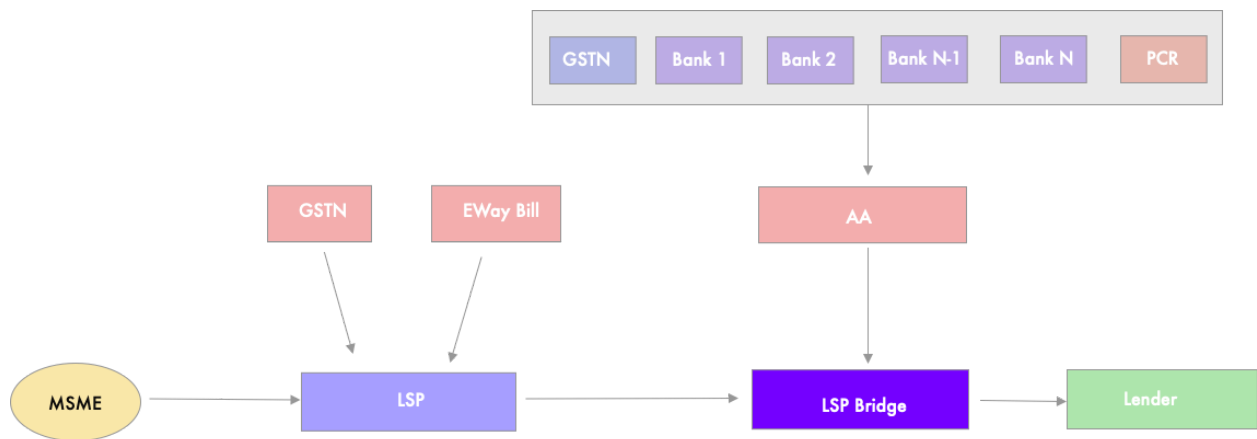


# LSP - Lender RFC

## High Level Architecture

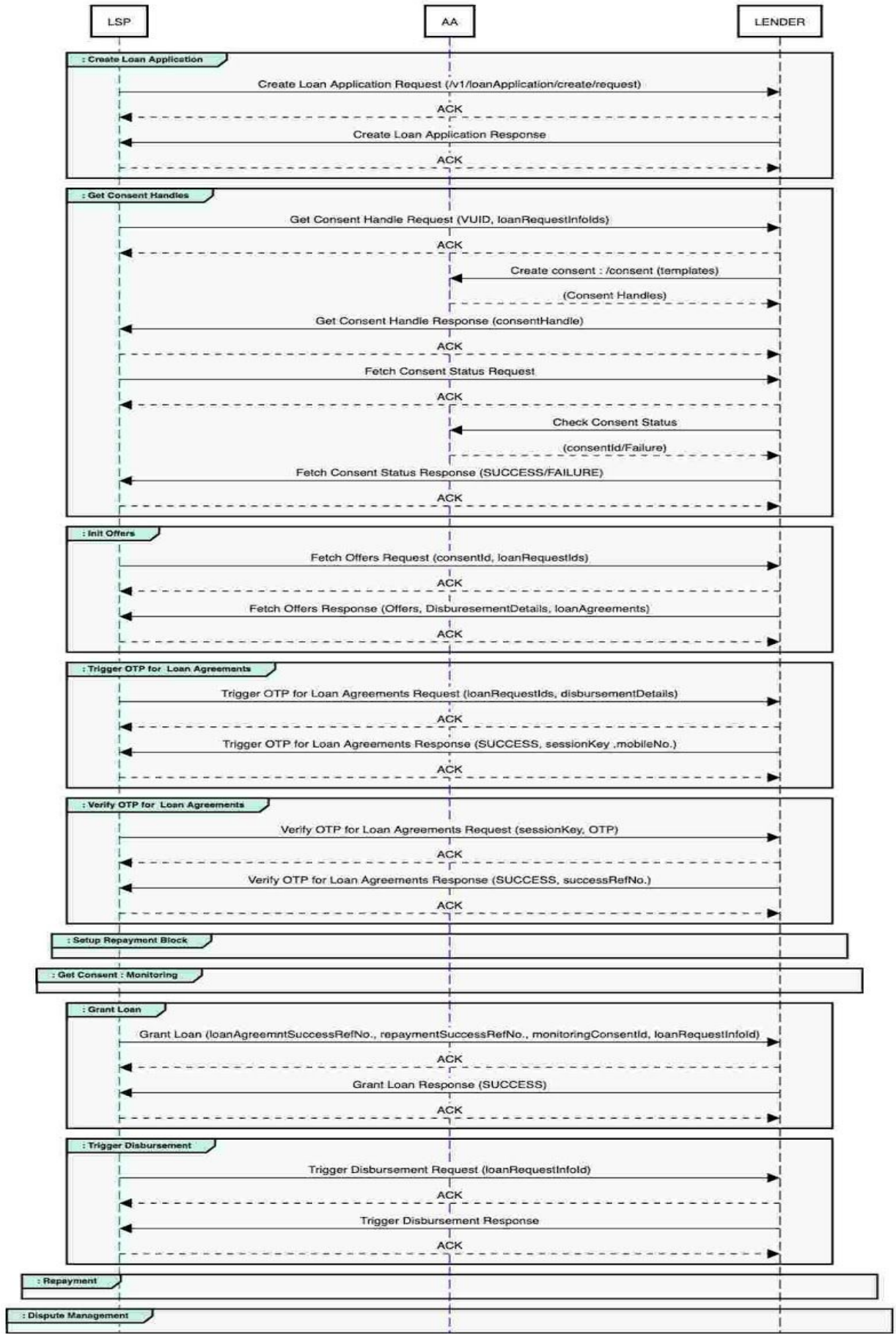


## Acronyms

|      |                                    |
|------|------------------------------------|
| MSME | Micro Small and Medium Enterprises |
| AA   | Account Aggregator                 |
| GSTN | Goods and Service Tax Network      |
| PCR  | Public Credit Registry             |
| LSP  | Loan Service Provider              |
| FIP  | Financial Information Provider     |
| FIU  | Financial Information User         |

## Flow Diagram

# LSP Lender API Sequence Diagram



# API

- All the APIs are Async.
- Each API request generates a standardized Acknowledgement from the other end.
- LSP can poll for the status and/or Lender sends a webhook.
- Each function has 2 separate APIs. For example: Create Loan Application has 2 APIs
  - CreateLoanApplicationRequest -> Request sent by LSP to the Lender
  - CreateLoanApplicationResponse -> Async Response sent by Lender to LSP
- Update APIs for MSMEs to push more data as requested by Lender

| Category         | Api Name                           | Description   | Bhim 4 Lending Need |
|------------------|------------------------------------|---|---------------------|
| Loan Application | Create Loan Application Request    | Creates a loan application with the lender system   | Must Have           |
|                  | Create Loan Application Response   | Response for the Create Loan Application invoked by the lender which includes the status of application | Must Have           |
|                  | Update Loan Application Request    | Updates an already created loan application with additional data  | Good To Have        |
|                  | Update Loan Application Response   | Response for the Update Loan Application invoked by the lender  | Good To Have        |
|                  | Withdraw Loan Application Request  | Withdraws an already created Loan Request   | Good To Have        |
|                  | Withdraw Loan Application Response | Response for the Withdraw Loan Application invoked by the lender  | Good To Have        |
|                  | Loan Application Status Request    | Request raised by the LSP to get the status of the Loan Application                                     | Must Have           |
|                  | Loan Application Status Response   | Response provided by the lender for the status of the Loan Application                                  | Must Have           |
| Offers           | GetOffersRequest                   | Request raised by an LSP to fetch offers for a previously raised loan application                       | Must Have           |

|            |                       |  |           |
|------------|-----------------------|--|-----------|
|            | GetOffersResponse     | Response provided by Lender to LSP which includes the Offers   | Must Have |
|            | OfferStatusRequest    | Request raised by LSP to lender to check the status of offers when response is not received within expected time                 | Must Have |
|            | OfferStatusResponse   | Response provided by Lender to LSP to inform the status of offers  | Must Have |
| Consent    | ConsentHandleRequest  | Request Raised by LSP to Lender to trigger creation of consent requests in the AA system   | Must Have |
|            | ConsentHandleResponse | Response given by lender to LSP with the consent handles for the consent requests raised   | Must Have |
|            | ConsentStatusRequest  | Request raised by LSP to Lender to check the Consent artifact creation status  | Must Have |
|            | ConsentStatusResponse | Response sent by LSP to Lender which includes the ConsentIds and their statuses  | Must Have |
| OTP        | TriggerOTPRequest     | Request sent by LSP to lender to send an OTP to phone number associated with disbursement account for agreeing to the loan terms | Must Have |
|            | TriggerOTPResponse    | Response given by the lender for TriggerOTPRequest   | Must Have |
|            | VerifyOTPRequest      | Request sent by the LSP to lender with the OTP that was sent to the phone number   | Must Have |
|            | VerifyOTPResponse     | Response given by the lender acknowledging the verification of OTP   | Must Have |
| Grant Loan | Grant Loan Request    | Request raised by the LSP to get a loan granted for the borrowed. This API creates the loan in the lenders system                | Must Have |
|            | Grant Loan Response   | Response given by the lender back to the LSP once the loan is  | Must Have |

|              |                               |   |              |
|--------------|-------------------------------|---|--------------|
|              |                               | created in the lending system   |              |
|              | Update Loan Request           | Updates an already created loan   | Good To Have |
|              | Update Loan Response          | Response given by the lender back to the LSP once update loan request completes | Good To Have |
|              | Loan Status Request           | Request raised by the LSP to get the status of the loan from the lender         | Must Have    |
|              | Loan Status Response          | Response given by the lender for the status of the loan                         | Must Have    |
|              | Loan History                  | Details about the loan, including repayment history                             | Must Have    |
| Repayment    | Reconcile Repayment Request   | Inform lender of the repayment for a loan made through LSP app                  | Good To Have |
|              | Reconcile Repayment Response  | Response given by the lender for ReconcileRepaymentRequest                      | Good To Have |
|              | GetRepaymentPlansRequest      | Request Raised by LSP to get all Repayment plans offered by Lender              | Good To Have |
|              | GetRepaymentPlansResponse     | Response from the Lender to LSP listing all Repayment Plans                     | Good To Have |
|              | UpdateRepaymentPlanRequest    | Request raised by LSP to change the currently chosen repayment plan             | Good To Have |
|              | UpdateRepaymentPlanResponse   | Response given by lender indicating the status of update Repayment              | Good To Have |
| Disbursement | Trigger Disbursement Request  | Request raised by LSP to Lender to trigger disbursement                         | Must Have    |
|              | Trigger Disbursement Response | Response given by the lender for TriggerDisbursement                            | Must Have    |
|              | GetDisbursementPlansRequest   | Request Raised by LSP to get all Disbursement plans offered by Lender           | Good To Have |
|              | GetDisbursementPlansResponse  | Response from the Lender to LSP listing all Disbursement                        | Good To Have |

|                    |                                |  |              |
|--------------------|--------------------------------|--|--------------|
|                    |                                | Plans  |              |
|                    | UpdateDisbursementPlanRequest  | Request raised by LSP to change the currently chosen disbursement plan | Good To Have |
|                    | UpdateDisbursementPlanResponse | Response given by lender indicating the status of update Disbursement  | Good To Have |
| Dispute Management | Raise Dispute Response         | Response given to LSP by lender post RaiseDisputeRequest               | Must Have    |
|                    | Update Dispute Request         | Request sent by LSP to Lender to Update dispute against a loan         | Must Have    |
|                    | Update Dispute Response        | Response given by lender to LSP post UpdateDisputeRequest              | Must Have    |
|                    | Dispute Status Request         | Query dispute status   | Must Have    |
|                    | Dispute Status Response        | Same as Dispute Status initiated by Lender                             | Must Have    |
|                    |                                |  |              |

## Domain Object List

| Name               | Description  |
|--------------------|--|
| Metadata           | Metadata about each API request  |
| Purpose            | Purpose for which the loan is requested  |
| Borrower           | Details about the Borrower, this identifies with verification status etc.  |
| Address            | Details about the Address of the Borrower  |
| Collateral         | Security against which the loan is requested by the Borrower   |
| AmountType         | Details of the amount including the currency   |
| LoanRequestDetails | Details about Loan the user wants, minAmount, maxAmount, tenure etc  |
| Reference          | Object used for making pointing to a different entity in the request/response. For example: if the lender wants to refer a document from the Collateral section, this object should be populated with details of |

|                     |   |
|---------------------|---|
|                     | the document object in payload  |
| Ack                 | Acknowledgement response for any Async request  |
| ActionRequired      | Details of any specific action that the lender wants from the borrower. Can include submitting additional documents, furnishing additional details                            |
| LoanDetails         | Details about the Loan that is granted to the user  |
| LoanInsurance       | Details of the Loan that is tied to the insurance. Can also be a reference to an insurance policy   |
| AcceptedOffer       | Details about the offer, disbursement and repayment plans that the borrower has chosen  |
| AccountDetails      | Object for capturing account details  |
| TriggerDisbursement | Details needed for initiating a borrower led disbursement   |
| LoanTenure          | Details about the tenure of the loan including duration and units   |
| LoanTermsHistory    | Details about how the loan parameters - amount, interest rate, tenure has changed over the course of loan   |
| Documents           | All the data presented by the user to be used for granting loan will be classified as documents. Example - GST Invoices, Bank History, GST Summary, Swiggy Restaurant History |
| LoanOffer           | LoanOffer will have the offer details like interest rate, tenure, minAmount, maxAmount etc  |
| RejectionDetails    | If a lender rejects a loanRequest, it needs to send standardized rejection codes and user message.  |
| LoanApplication     | This will have all the details like loan agreement, acceptedOfferId, supportingDocuments, eLien etc   |
| DisbursementHistory | All the disbursements made against the loan offered via the LSP, this is to be shown in the LSP App.  |
| RepaymentHistory    | All the repayments made against the loan offered via the LSP, this is to be shown in the LSP App.   |
| Guarantors          | Guarantors for the loan application. This can internally some signed certificates given by Guarantor. Beyond the scope of MVP, added this for future use-cases.               |
| Collaterals         | Collateral details presented by the user for the loan application. Beyond the scope of MVP, added this for future use-cases.  |

## Security



- All communication between LSP <-> Lender should happen over HTTPS(TLS 1.1 and above)
- Connection should be a two-way TLS connection
- All API Request/Response should be digitally signed as per the JSON Web Signature Specification-
- RSA with SHA-256 should be used to sign the request/response of the APIs
- To avoid data duplication, we will follow Detached Signature Approach as described in Appendix F of the JWT RFC(<https://tools.ietf.org/html/rfc7515#appendix-F>)
- All API request should contain the current timestamp (Unix Epoch Time - ISO8601, precision of millisecond).

#### Example

```
{ "requestId" : "6e450b4ffc4547dca24e65e4a39e5213"
, "entityId"   : "BHIM_SAHAY"
, "loanFile"   : "Test"
, "keyId"      : "BHIM_SAHAY_001"
, "timestamp"  : "1568724239598"
, "signature"  :
"eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9.MYAFKORkChiqgSsZDMZXoyDqTBUQ8EdATq--Q0B3oGUh
Nf9D9tZp3GjJG7dXCse5AZ9SfHFjcMMu8HC3HTC8YvgMfj8BX7nfMflHng41ZTE35r81AfyR2eSr_4QFf7E
XYX6l7IK4ljCoSzD24UU-Ksx09VPxQ2zjgoNo8eaqKcSAPCj78IUvHnmxkn9W6zFOTDq0LS8pGSotCFxN
HP6qL4gEnp4EM66FnVPJNP-gz5zV-wMwmtm0fT0A7hjZlufIzcYaENa-OgSR_UaCT5Vo8H1F0_DDLtTT
GEp2VU1qklkkuXBjVo3b4ZBHG3yztNQntgzk629xYOWBWPgAJOCTA"
}
```

```
where header = { "alg": "RS256", "typ": "JWT" }
signature = base64Encode(header) + "." + base64Encode(jws_signature)
```

## API Specification

The payloads under each of the APIs are the payloads that is needed for the BHIM4 Lending use-case. The objects defined however are more generic and can cater to a wider set of lending

use-cases. More details regarding the objects and the specific fields under each can be found under the Domain Object Specification section.

## Loan Application APIs

### 1) Create Loan Application Request

HTTP Verb - POST

API Endpoint - /v1/loanApplication/createLoanApplicationRequest

This API is called by the LSP to create a loan application request in the borrower system. The LSP sends the basic details regarding the loan request to the lender using this API.

#### Request Payload

| Key               | type   | Validations     | Mandatory | Description   |
|-------------------|--|-----------------|-----------|---|
| metadata          | Metadata   |                 | Yes       | Metadata specific to each API request.  |
| createdDate       | ISODateTime                                      | Max Length : 50 | Yes       | Time when the loan application was created  |
| loanApplicationId | Alphanumeric                                     | Length : 35     | Yes       | UUID for the loan application. Generated by LSP   |
| type              | CASH FLOW   PERSONAL   HOME   VEHICLE   BUSINESS | Max Length : 20 | Yes       | Expandable Enum. Captures the type of loan. Will be Cash Flow for invoice based loans.    |
| borrower          | Borrower   |                 | Yes       | Details of the Borrower   |
| collaterals       | Array Collateral                                 |                 | Yes       | Details of the instruments against which user wishes to take loan. If no data is there to |

|            |                  |  |     |  |
|------------|------------------|--|-----|--|
|            |                  |  |     | be sent, an empty array block can be passed.   |
| guarantors | Array Guarantors |  | Yes | List of guarantors that the borrowers have for the loan. If no data is there to be sent, an empty array block can be passed. |
| applicants | Array Applicant  |  | Yes | List of applicants for the loan. If no data is there to be sent, an empty array block can be passed                          |
| terms      | TermDetails      |  | Yes | Terms of loan agreement  |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Json

```
{
  "metadata": {
    "version": "1.00",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  }
}
```

```
},
"createdDate": "2020-03-01T00:00:00Z",
"loanApplicationId": "fae1f6f2-d982-46bd-acfc-e8250fe13824",
"type": "CASHFLOW",
"borrower": {
  "primaryId": "CPAA1234A",
  "primaryIdType": "PAN",
  "additionalIdentifiers": [],
  "name": "John doe",
  "category": "ORGANISATION",
  "contactDetails": [
    {
      "type": "PRIMARY",
      "phone": "7777777777",
      "email": "johndoe@defenterprises",
      "address": {
        "co": "<care of>",
        "hba": "<House/Building/Apartment>",
        "srl": "<Street/Road/Lane>",
        "landmark": "",
        "als": "<Area/Locality/Sector>",
        "vtc": "<Village/Town/City>",
        "pincode": "",
        "po": "",
        "district": "",
        "state": "",
        "country": "",
        "uri": "<digital address>",
        "latitude": "",
        "longitude": ""
      }
    }
  ]
},
],
```

```
"documents": [
    {
        "format": "JSON",
        "reference": "3c986a71-15c2-46a3-bf20-810ed203e06d",
        "source": "GSTN",
        "sourceIdentifier": "GSTN",
        "type": "GSTN_PROFILE",
        "isDataInline": true,
        "data":
            "eyJzdGpDZCI6IkFQMDAzIiwibGdubSI6Ik1lTIENPULBPUKFUSU9OIiwic3RqIjoiQkNQIEtPREllLT05EQSIsImR0eSI6IlJlZ3VsYXkiLCJjeGR0IjoiIiwiz3N0aW4iOiIwNUFCTlRzMzI5MFA4WkEiLCJuYmEiOlsiQm9uZGVkIFdhcmVob3VzZSIsIkVPVSAvIFNUUCAvIEVIVFAiLCJGYWN0b3J5IC8gTWFudWZhY3RlcmluZyIsIklucHV0IFNlcnZpY2UgRGltZdHJpYnV0b3IgKElTRCkiLCJMZWZzaW5nIEJlc2luZXNzIl0sImxzZHVwZHQiOiIwNS8wMS8yMDE3IiwicmdkdCI6IjA1LzA1LzIwMTciLCJjdGIiOiJGb3JlaWduIExMUCIsInN0cyI6IlByb3Zpc2lvbmFsIiwiY3RqQ2QiOiJBUDAwNCIsImN0aiI6IkJDUCBUSFVNTUFLVU5UQSIsInRyYWRLTmFtIjoiQUxUT04gUExBU1RJQyBQUklWQVRFIExURCIsImFkYWRYIjpbeyJhZGRyIjp7ImJubSI6IkVMUEhJTlNUT05FIEJSVSUXESU5HIiwic3QiOiIxMCwgVkVFUiBOQVJJTUFOIFJPQUqiLCJsb2MiOiJGT1JUUiwiYm5vIjoiMTAiLCJzdGNkIjoiUmFqYXN0aGFuIiwizmxubyI6IjFTVCBGTE9PUiIsImx0IjoiInZQuMjE3OSIsImxnIjoiMjcUMDIzOCIsInBuY2QiOiIOMDAwMDEifSwibnRyIjpbIldob2xlczFsZSBcdXNpbmVzcylJdfV0sInByYWRYIjpb7ImFkZHIiOnsiYm5tIjoiS0FUR0FSQSBIT1VTRSIsInN0IjoiMTUsIEWgSkFH TU9IQU5EQVMgTUFSSrYsImxvYyI6Ik1BTEFCQVIgSElMTCIsImJubyI6IjUiLCJzdGNkI joiTWFoYXJhc2h0cmEiLCJmbG5vIjoiNFRIIEZMT09SIiwibHQiOiI3NC4yMTc5IiwibG ciOiIyNy4wMjM4IiwicG5jZCI6IjQwMDAwNiJ9LCJudHIiOlsiV2hvbgVzYWxlIEJlc2lu ZXNzIl19fQ=="
    }
]
},
"collateral": [
    {
        "collateralPrimaryId": "<GSTIN>_<INVOICENUM>",
        "collateralPrimaryIdType": "GST INVOICE",
```

```
    "type": "GST_INVOICE",
    "additionalIdentifiers": [],
    "valuation": {
      "value": "",
      "currency": "",
      "date": "",
      "source": "GSTN"
    },
    "parties": [],
    "documents": [
      {
        "format": "JSON",
        "reference":
"3c986a71-15c2-46a3-bf20-810ed203e06d",
        "source": "GSTN",
        "sourceIdentifier": "GSTN",
        "type": "GSTN B2B INVOICE",
        "isDataInline": true,
        "data":
"eyJjaGtzdW0iOiJCQlVJQlVJVU1KS0tCSktHVVlGVEZHVVkiLCJlcGRieSI6IlMiLCJp
bnVtIjoiUzAwODQwMCIsImIkdCI6IjI0LTExLTlIwMTYiLCJ2YWwiOjcyOTI0OC4xNiwic
G9zIjoiMDYiLCJyY2hyZyI6Ik4iLCJldGluIjoiMDFBQUJDRtU1MDdSMVo0IiwiaW52X3
R5cCI6IlIiLCJjZmxhZyI6Ik4iLCJkaWZmX3BlcmNlbnQiOjAuNjUsIm9wZCI6IjIwMTY
tMTIiLCJpdGlzIjpbeyJudW0iOjEsImI0bV9kZXQiOjUsInR4dmFsIjoxMDAw
MCwiaWFtdCI6MzIiLCJjYW10IjowLCJzYW10IjowLCJjc2FtdCI6MTB9fV19"
      }
    ]
  },
  "guarantors": [],
  "applicants": [{
    "primaryId": "9898989898",
    "primaryIdType": "MOBILE"
```

```
    }],  
    "terms" : {  
        "requestedAmount" : "50000.00",  
        "currency" : "INR",  
    }  
}
```

#### Sample Response Json

```
{  
  "ack": {  
    "error": "0",  
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",  
    "timestamp": "2018-12-06T11:39:57.153Z"  
  }  
}
```

## 2) Create Loan Application Response

This is the response for Create Loan Application but invoked by lender. No offers are rolled out as part of this API. If the lender system finds preliminary information sufficient for doing the loan processing, it will send "PROCESSING" as the status. Otherwise, it can reject the application citing a reason for the same.

HTTP Verb - POST

API Endpoint - /v1/loanApplication/createLoanApplicationResponse

Request Payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|                       |   |             |     |  |
|-----------------------|---|-------------|-----|--|
| metadata              | Metadata  |             | Yes | Metadata specific to each API request.   |
| response              | Response  |             | Yes | Status of response. Whether success or has encountered error   |
| loanApplicationId     | Alphanumeric  | Length : 35 | Yes | UUID for the loan application. Generated by LSP. Sent back in the response to identify the loan application. |
| lender                | Lender  |             | Yes | Details of the Lender  |
| rejectionDetails      | Array RejectionDetails                                      |             | No  | Reason given by the lender for rejecting a loan request raised by the borrower                               |
| actionRequired        | Array ActionRequired  |             | No  | Details of the action requested from the borrower by the lender  |
| loanApplicationStatus | PROCESSING   OFFERED   GRANTED   REJECTED   ACTION_REQUIRED | ENUM        | Yes | Status indicating whether the lender has rolled out an offer   |

## Response Payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|



|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "loanApplicationId": "fae1f6f2-d982-46bd-acfc-e8250fe13824",
  "lender": {
    "primaryId": "AWWPA7645M",
    "primaryIdType": "PAN",
    "additionalIdentifiers": [],
    "name": "ABC Bank",
    "category": "ORGANISATION",
    "contactDetails": [],
    "documents": []
  },
  "loanApplicationStatus" : "PROCESSING"
}
```

### Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## Consent APIs

### 1) Consent Handle Request

HTTP Verb - POST

API Endpoint - /v1/consent/consentHandleRequest

This API is used to request the lenders to send a consent request for fetching the bank account statements, GST historical data. The lender (FIU) checks with the AA and creates and consent handle internally once this API is triggered

#### Request Payload

| Key                | type                  | Validations                       | Mandatory | Description   |
|--------------------|-----------------------|-----------------------------------|-----------|---|
| metadata           | Metadata              |                                   | Yes       | Metadata specific to each API response  |
| vua                | String                | Min Length : 3<br>Max Length : 50 | Yes       | Customer unique identifier created by the AA. Example : user@onemoney.in                      |
| loanApplicationIds | Array<br>Alphanumeric | Ids are of length 35 each         | Yes       | UUID for the loan applications. Generated by LSP. These are the list of loan Applications for |

|                      |                    |                           |     |  |
|----------------------|--------------------|---------------------------|-----|--|
|                      |                    |                           |     | which borrower wants consents to be created  |
| lspInfo              | LSPInfo            |                           | No  | This information is supposed to be passed to AA so that they can write custom logic for handling the consent                           |
| consentRequestId     | Alphanumeric       | Ids are of length 35 each | Yes | This request id is used to show tie its response with request  |
| consentFetchType     | PERIODIC   ONETIME | ENUM                      | Yes | Periodicity for the consent data fetch   |
| consentAggregationId | Alphanumeric       | Ids are of length 35 each | Yes | This is an id generated by LSP which is passed on to AA to tell the AA how to aggregate all the consent requests from all the lenders. |

## Response payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
```

```

        "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
        "orgId": "LSP123"
    },
    "vua": "user@aa.in",
    "loanApplicationIds": [
        "54947df8-0e9e-4471-a2f9-9af509fb5889"
    ],
    "consentFetchType": "ONETIME",
    "consentRequestId": "f7d01827-0522-42a2-a2f4-4d871325d58d",
    "isAggregationEnabled": true,
    "consentAggregationId": "ac46d4c9-757c-49b7-864f-8ffc7db7a326",
    "lspInfo": {
        "lspId": "<AA can identify the LSP based on this>",
        "version": "<version of LSP>",
        "appName": "<Package name of the app>"
    }
}

```

## Sample Response Json

```

{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

## 2) Consent Handle Response

HTTP Verb      - POST  
 API Endpoint   - /v1/consent/consentHandleResponse

This API is invoked by the lenders to send the consent handles created in the AA system as part of Consent Handle Request API triggered by the LSP.

#### Request Payload

| Key              | type     | Validations | Mandatory | Description  |
|------------------|----------|-------------|-----------|--|
| metadata         | Metadata |             | Yes       | Metadata specific to each API response   |
| response         | Response |             | Yes       | Status of response. Whether success or has encountered error   |
| consentHandle    | String   | Length : 36 | No        | Consent handles created by the AA for the lender's request. This field will be filled when status is PENDING |
| consentRequestid | String   | Length : 35 | Yes       | This is the id which is used to tie the request and response   |

#### Response payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Payload

```
{  
  "metadata": {
```

```

    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "FIU123"
  },
  "response": {
    "error": "0"
  },
  "consentRequestId" : "f7d01827-0522-42a2-a2f4-4d871325d58d",
  "consentHandle" : "39e108fe-9243-11e8-b9f2-0256d88baae8"
}

```

#### Sample Response Payload

```

{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

### 3) Consent Status Request

HTTP Verb - POST

API Endpoint - /v1/consent/consentStatusRequest

This API is invoked by the LSP to check the status of Consents.

#### Request Payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|                  |              |                           |     |   |
|------------------|--------------|---------------------------|-----|---|
| metadata         | Metadata     |                           | Yes | Metadata specific to each API response                        |
| consentRequestId | Alphanumeric | Ids are of length 35 each | Yes | This request id is used to show tie its response with request |

## Response payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "LSP123"
  },
  "consentRequestId" : "39e108fe-9243-11e8-b9f2-0256d88baae8"
}
```

## Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  }
}
```

```

    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

#### 4) Consent Status Response

HTTP Verb - POST

API Endpoint - /v1/consent/consentStatusResponse

This API is invoked by the lender as a response informing the LSP regarding the status of the consents.

Request Payload

| Key                  | type                           | Validations                  | Mandatory | Description   |
|----------------------|--------------------------------|------------------------------|-----------|---|
| metadata             | Metadata                       |                              | Yes       | Metadata specific to each API response                        |
| response             | Response                       |                              | Yes       | Status of response. Whether success or has encountered error  |
| consentRequest<br>Id | Alphanumeric                   | Ids are of<br>length 35 each | Yes       | This request id is used to show tie its response with request |
| consentHandle        | String                         | Length : 35                  | Yes       | Consent handle  |
| consentStatus        | READY  <br>PENDING  <br>FAILED | ENUM                         | Yes       | Status of the consent   |

Response payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|



|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

#### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "consentRequestId": "39e108fe-9243-11e8-b9f2-0256d88baae8",
  "consentHandle": "39e108fe-9243-11e8-b9f2-0256d88baae8",
  "consentStatus": "READY"
}
```

#### Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## Offers APIs

### 1) Generate Offers Request

HTTP Verb - POST

API Endpoint - /v1/offer/generateOffersRequest

Once the consents needed for fetching data are ready, the LSP sends a request to the Lenders to generate the offer for a set of loan applications. All these loan applications belong to the same borrower. This API is the trigger point for the lenders to use the consentIds that were created for the loanapplicationids as part of the Consent APIs to fetch the data from various FIPs as needed for the loan use case. Once the data from these sources have been obtained, the lender system runs its business rules on the data and creates the offers

#### Request Payload

| Key                | type               | Validations                        | Mandatory | Description   |
|--------------------|--------------------|------------------------------------|-----------|---|
| metadata           | Metadata           |                                    | Yes       | Metadata specific to each API response  |
| loanApplicationIds | Array Alphanumeric | Each loan application of length 35 | Yes       | UUID for the loan applications. Generated by LSP. These are the list of loan Applications for which borrower wants offers |
| consentRequestid   | Alphanumeric       | Ids are of length 35 each          | Yes       | This request id is used to show tie its response with request   |

#### Response payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "LSP123"
  },
  "loanApplicationIds" : [
    "54947df8-0e9e-4471-a2f9-9af509fb5889"
  ],
  "consentRequestId": "5494eee8-0e9e-4471-a2f9-9af509fb5889"
}
```

### Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 2) Generate Offers Response

HTTP Verb      - POST  
API Endpoint   - /v1/offer/generateOffersResponse

This API is invoked by lender informing the borrower regarding the various loan offers that has been generated corresponding to each of the loan applications. This is a bulk API, where multiple loan offers can be sent to the borrower in one shot.

#### Request Payload

| Key              | type             | Validations | Mandatory | Description  |
|------------------|------------------|-------------|-----------|--|
| metadata         | Metadata         |             | Yes       | Metadata specific to each API request.                       |
| response         | Response         |             | Yes       | Status of response. Whether success or has encountered error |
| loanApplications | Array LoanOffers | Length : 35 | Yes       | UUID for the loan application. Generated by LSP              |

#### LoanOffers

| Key               | type                    | Validations | Mandatory | Description  |
|-------------------|-------------------------|-------------|-----------|--|
| loanApplicationId | String                  | Length : 35 | Yes       | Loan application id generated by the LSP to track the loan application         |
| rejectionDetails  | Array Rejection Details |             | No        | Reason given by the lender for rejecting a loan request raised by the borrower |
| actionRequired    | Array ActionRequired    |             | No        | Details of the action requested from the borrower by the lender                |

|                           |  |      |     |  |
|---------------------------|--|------|-----|--|
| offers                    | Array Offer  |      | No  | Details of the loan offer provided by the lender to the borrower |
| loanApplication<br>Status | PROCESSING  <br>OFFERED   GRANTED  <br>REJECTED  <br>ACTION_REQUIRED | ENUM | Yes | Status indicating whether the lender has rolled out an offer     |

## Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "loanApplications": [
    {
```

```
    "loanApplicationId":
"54947df8-0e9e-4471-a2f9-9af509fb5889",
    "offers": [
      {
        "id": "e4eb7147-435a-4ee9-af45-f772e2335bce",
        "validTill": "2018-12-06T00:00:00.000Z",
        "terms": {
          "requestedAmount": "50000",
          "currency": "INR",
          "account": "3439989899",
          "accountType": "50000",
          "sanctionedAmount": "50000",
          "interestType": "FIXED | FLOATING",
          "interestRate": "",
          "tenure": {
            "duration": "",
            "unit": ""
          },
          "legalAgreement": {
            "type": "TEXT",
            "data": "<Base64 Encoded Data>"
          },
          "charges": {
            "prepayment": {
              "chargeType": "RATE_BASED",
              "data": {
                "rate": "6",
                "applicableParameter":
"TOTAL_LOAN_AMOUNT"
              }
            },
            "bounce": {
              "chargeType": "FIXED_AMOUNT",
```

```
        "data": {
            "amount": "3000.00"
        }
    },
    "latePayment": {
        "chargeType": "FIXED_AMOUNT",
        "data": {
            "amount": "3000.00"
        }
    },
    "processing": {
        "chargeType": "FIXED_AMOUNT",
        "data": {
            "amount": "3000.00"
        }
    }
},
"disbursement": {
    "plans": [
        {
            "id": "DP122324",
            "autoDisbursement": false,
            "scheduleType": "ONE_TIME",
            "amount": "10000.00"
        }
    ],
    "accountDetails": {
        "accountDataType": "ACCOUNT",
        "data": {
            "accountType": "CURRENT",
            "maskedAccountNumber": "XXXXXXXXXX9090"
        }
    }
}
```

```

    }
  },
  "repayment": {
    "plans": [
      {
        "id": "RP12334",
        "autoRepayment": "Y",
        "scheduleType": "ONE_TIME",
        "amount": "10000"
      }
    ],
    "methods": [
      {
        "type": "EMANDATE",
        "data": {
          "refNumber": "",
          "amount": "50000",
          "amountType": "MAX",
          "activeFrom": "",
          "expiryDate": "",
          "destinationAccount": {
            "accountDataType": "ACCOUNT",
            "data": {
              "accountType": "CURRENT",
              "accountIFSC": "IKCC0009",
              "maskedAccountNumber":
"XXXXXXXXX9090",

              "accountNumber":
"1112090999090"
            }
          }
        },
        "sourceAccount": {
          "accountDataType": "VPA",

```





| Key                | type               | Validations | Mandatory | Description  |
|--------------------|--------------------|-------------|-----------|--|
| metadata           | Metadata           |             | Yes       | Metadata specific to each API response   |
| loanApplicationIds | Array Alphanumeric | Length : 35 | Yes       | UUID for the loan applications. Generated by LSP. These are the list of loan Applications for which borrower wants offers on |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Json

```
{
  "metadata": {
    "version": "0.1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "LSP123"
  },
  "loanApplicationIds" : [
    "54947df8-0e9e-4471-a2f9-9af509fb5889"
  ]
}
```

#### Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

#### 4) Offer Status Response

HTTP Verb - POST

API Endpoint - /v1/offers/offerStatusResponse

This API is invoked by the lender and is the asynchronous response to Offer Status Request API.

Request Payload

| Key              | type             | Validations          | Mandatory | Description  |
|------------------|------------------|----------------------|-----------|--|
| metadata         | Metadata         |                      | Yes       | Metadata specific to each API request.                       |
| response         | Response         |                      | Yes       | Status of response. Whether success or has encountered error |
| loanApplications | Array LoanOffers | All ids of length 35 | Yes       | UUID for the loan application. Generated by LSP              |

## LoanOffers

| Key                   | type  | Validations | Mandatory | Description  |
|-----------------------|---|-------------|-----------|--|
| loanApplicationId     | String  | Length : 35 | Yes       | UUID for the loan applications. Generated by LSP. These are the list of loan Applications for which borrower wants offers on |
| rejectionDetails      | Array Rejection Details                                     |             | No        | Reason given by the lender for rejecting a loan request raised by the borrower   |
| actionRequired        | Array Action Required                                       |             | No        | Details of the action requested from the borrower by the lender  |
| offers                | Array Offer   |             | No        | Details of the loan offer provided by the lender to the borrower   |
| loanApplicationStatus | PROCESSING   OFFERED   GRANTED   REJECTED   ACTION_REQUIRED | ENUM        | Yes       | Status indicating whether the lender has rolled out an offer   |

## Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "loanApplications": [
    {
      "loanApplicationId":
"54947df8-0e9e-4471-a2f9-9af509fb5889",
      "offers": [
        {
          "id": "e4eb7147-435a-4ee9-af45-f772e2335bce",
          "validTill": "2018-12-06T00:00:00.000Z",
          "terms": {
            "requestedAmount": "50000",
            "currency": "INR",
            "account": "3439989899",
            "accountType": "50000",
            "sanctionedAmount": "50000",
            "interestType": "FIXED | FLOATING",
            "interestRate": "",
            "tenure": {
              "duration": "",
              "unit": ""
            }
          },
        },
      ],
    },
  ],
}
```

```
    "legalAgreement": {
      "type": "TEXT",
      "data": "<Base64 Encoded Data>"
    },
    "charges": {
      "prepayment": {
        "chargeType": "RATE_BASED",
        "data": {
          "rate": "6",
          "applicableParameter":
"TOTAL_LOAN_AMOUNT"
        }
      },
      "bounce": {
        "chargeType": "FIXED_AMOUNT",
        "data": {
          "amount": "3000.00"
        }
      },
      "latePayment": {
        "chargeType": "FIXED_AMOUNT",
        "data": {
          "amount": "3000.00"
        }
      },
      "processing": {
        "chargeType": "FIXED_AMOUNT",
        "data": {
          "amount": "3000.00"
        }
      }
    }
  },
}
```

```
"disbursement": {
  "plans": [
    {
      "id": "DP122324",
      "autoDisbursement": false,
      "scheduleType": "ONE_TIME",
      "amount": "10000.00"
    }
  ],
  "accountDetails": {
    "accountDataType": "ACCOUNT",
    "data": {
      "accountType": "CURRENT",
      "maskedAccountNumber": "XXXXXXXXXX9090"
    }
  }
},
"repayment": {
  "plans": [
    {
      "id": "RP12334",
      "autoRepayment": "Y",
      "scheduleType": "ONE_TIME",
      "amount": "10000"
    }
  ],
  "methods": [
    {
      "type": "EMANDATE",
      "data": {
        "refNumber": "",
        "amount": "50000",
        "amountType": "MAX",
```

```

        "activeFrom": "",
        "expiryDate": "",
        "destinationAccount": {
            "accountDataType": "ACCOUNT",
            "data": {
                "accountType": "CURRENT",
                "accountIFSC": "IKCC0009",
                "maskedAccountNumber":
"XXXXXXXXX9090",
                "accountNumber":
"1112090999090"
            }
        },
        "sourceAccount": {
            "accountDataType": "VPA",
            "data": {
                "vpa": "abc@vpa"
            }
        }
    }
],
    "loanApplicationStatus": "OFFERED"
}
]
}

```

Sample Response Json

```
{
```



```

"ack": {
  "error": "0",
  "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "timestamp": "2018-12-06T11:39:57.153Z"
}
}

```

## OTP APIs

### 1) Trigger OTP Request

HTTP Verb - POST

API Endpoint - /v1/loan/triggerOTPRequest

This API is invoked by the LSP when the user agrees to the terms of the agreement. The Asynchronous response for this API should include the lender sending an OTP to the phone number associated with disbursement account.

#### Request Payload

| Key              | Type               | Validations               | Mandatory | Description   |
|------------------|--------------------|---------------------------|-----------|---|
| metadata         | Metadata           |                           | Yes       | Metadata specific to each API request.                          |
| otpRequestId     | Alphanumeric       | Length : 35               | Yes       | Unique id generated by the LSP for the otp request              |
| selectedOfferIds | Array Alphanumeric | Ids are of length 35 each | Yes       | List of offers chosen by the borrower to which he has agreed to |

|                            |                |  |     |  |
|----------------------------|----------------|--|-----|--|
| disbursementAccountDetails | AccountDetails |  | Yes | Disbursement account chosen for each of the above offers |
|----------------------------|----------------|--|-----|--|

## Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "otpRequestId": "e78b555b-5be2-0f95-7840-864d749854cb",
  "selectedOfferIds": [
    "BKCCMSME10"
  ],
  "disbursementAccountDetails": {
    "type": "ACCOUNT",
    "data": {
      "accountType": "CURRENT",
      "accountIFSC": "KHS6761232",
      "maskedAccountNumber": "XXXXXXXX9090"
    }
  }
}
```

```
}
```

## Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 2) Trigger OTP Response

HTTP Verb - POST

API Endpoint - /v1/loan/triggerOTPResponse

This API is invoked by the Lender when the Lender sends out an OTP to the phone number associated with the disbursement account. This API is an asynchronous response to the OTP trigger request by the LSP.

### Request Payload

| Key      | Type     | Validations | Mandatory | Description                            |
|----------|----------|-------------|-----------|--|
| metadata | Metadata |             | Yes       | Metadata specific to each API request. |

|               |              |             |     |   |
|---------------|--------------|-------------|-----|---|
| response      | Response     |             | Yes | Status of response. Whether success or has encountered error  |
| otpRequestId  | Alphanumeric | Length : 35 | Yes | Unique id generated by the LSP for otp request                |
| otpSessionKey | String       | Length : 35 | Yes | otpSession created for verifying the OTP sent by the borrower |

#### Response Payload

| Key | type | Length | Mandatory | Description  |
|-----|------|--------|-----------|--|
| ack | Ack  |        | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "response": {
    "error": "0"
  },
  "otpSessionKey": "dses6-fgf664-adsasdasd-asdasdasdapok",
}
```

```
"otpRequestId": "e78b555b-5be2-0f95-7840-864d749854cb"
}
```

### Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 3) Verify OTP Request

HTTP Verb - POST

API Endpoint - /v1/loan/verifyOTPRequest

This API is invoked by the LSP when the user enters the OTP received on the mobile number associated with the disbursement account and agrees to the terms of the agreement. The asynchronous response for this API should include the lender acknowledging the receipt of OTP and verifying if the user has entered the correct OTP that was shared by the lender.

### Request Payload

| Key           | Type     | Validations | Mandatory | Description  |
|---------------|----------|-------------|-----------|--|
| metadata      | Metadata |             | Yes       | Metadata specific to each API request.   |
| otpSessionKey | String   | Length : 35 | Yes       | OTP Session Key. Generated by Lender.  |
| otp           | Numeric  | Length : 6  | Yes       | One time numeric password generated by lender sent to the registered mobile number |

|  |  |  |  |                                    |
|--|--|--|--|------------------------------------|
|  |  |  |  | of the disbursement account holder |
|--|--|--|--|------------------------------------|

## Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "otpSessionKey": "dses6-fgf664-adsasdasd-asdasdasdapok",
  "otp": "689451"
}
```

## Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

```
}  
}
```

#### 4) Verify OTP Response

HTTP Verb - POST

API Endpoint - /v1/loan/verifyOTPResponse

This API is invoked by the Lender when the OTP entered by the user is shared through the LSP. This API acknowledges the receipt of OTP and verifies if the user has entered the correct OTP that was shared by the lender on the mobile number associated with the disbursement account.

##### Request Payload

| Key                 | Type     | Validations | Mandatory | Description  |
|---------------------|----------|-------------|-----------|--|
| metadata            | Metadata |             | Yes       | Metadata specific to each API request.                       |
| response            | Response |             | Yes       | Status of response. Whether success or has encountered error |
| otpSessionKey       | String   | Length : 35 | Yes       | OTP Session Key. Generated by Lender.                        |
| otpSuccessRef<br>No | String   | Length : 35 | Yes       | Unique identifier for the status of of otpsuccess instance   |

##### Response Payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "FIU123"
  },
  "response": {
    "error": "0"
  },
  "otpSessionKey": "dses6-fgf664-adsasdasd-asdasdasdapok",
  "otpSuccessRefNo": "Rf12123"
}
```

### Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```



# Grant Loan APIs

## 1) Grant Loan Request

HTTP Verb - POST

API Endpoint - /v1/loan/grantLoanRequest

This API is invoked by the LSP once the borrower has agreed to the terms of the agreement, given consent for monitoring and set up a repayment option. This API creates the actual loan in the lender's system.

### Request Payload

| Key               | Type          | Validations                         | Mandatory | Description  |
|-------------------|---------------|-------------------------------------|-----------|--|
| metadata          | Metadata      |                                     | Yes       | Metadata specific to each API request.                                   |
| loanApplicationId | Alphanumeric  | Length :35                          | Yes       | UUID for the loan application. Generated by LSP                          |
| loanId            | Alphanumeric  | Length :35                          | Yes       | UUID for Loan. Generated by LSP  |
| vua               | String        | Max Length : 50                     | Yes       | Customer unique identifier created by the AA. Example : user@onemoney.in |
| consentRequestIds | Array String  | Array with each element length = 35 | Yes       | ConsentRequestIds generated by LSP for monitoring                        |
| acceptedOffer     | AcceptedOffer |                                     | Yes       | Details of the offer selected along with disbursement and repayment plan |

|               |        |             |     |   |
|---------------|--------|-------------|-----|---|
| otpSuccessRef | String | Length : 35 | Yes | SuccessRef which was got as part of accepting terms and conditions. |
|---------------|--------|-------------|-----|---|

## Response Payload

| Key | type | Length | Mandatory | Description  |
|-----|------|--------|-----------|--|
| ack | Ack  |        | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "loanId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "loanApplicationId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "otpSuccessRef": "Rf12123",
  "vua": "abc@aa.in",
  "consentRequestIds": [
    "654024c8-29c8-11e8-8868-0289437bf331"
  ],
  "acceptedOffer": {
    "id": "e4eb7147-435a-4ee9-af45-f772e2335bce",
    "repaymentPlanId": "RP12323",
  }
}
```

```
"disburesementPlanId": "DP12234",
"repayment": {
  "methods": [
    {
      "type": "EMANDATE",
      "data": {
        "refNumber": "Rf122232",
        "amount": "50000",
        "amountType": "MAX",
        "activeFrom": "2020-01-01",
        "expiryDate": "2020-04-01",
        "destinationAccount": {
          "accountDataType": "ACCOUNT",
          "data": {
            "accountType": "CURRENT",
            "accountIFSC": "IKCC0009",
            "maskedAccountNumber": "XXXXXXXX9090",
            "accountNumber": "1112090999090"
          }
        },
      },
      "sourceAccount": {
        "accountDataType": "VPA",
        "data": {
          "vpa": "abc@vpa"
        }
      }
    }
  ]
}
```

## Sample Response JSON

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 2) Grant Loan Response

This method is called by the Lender when the Grant Loan processing is completed. This informs the borrower about the status of the loan in the lender system. Upon successful creation of loan in the system, the lender returns all the details of the loan.

HTTP Verb - POST

API Endpoint - /v1/loan/grantLoanResponse

### Request Payload

| Key      | Type         | Validations | Mandatory | Description  |
|----------|--------------|-------------|-----------|--|
| metadata | Metadata     |             | Yes       | Metadata specific to each API request.                       |
| response | Response     |             | Yes       | Status of response. Whether success or has encountered error |
| loanId   | Alphanumeric | Length : 35 | Yes       | Unique identifier for loan generated by LSP                  |

|                           |  |      |     |  |
|---------------------------|--|------|-----|--|
| loanApplication<br>Status | PROCESSING  <br>OFFERED   GRANTED  <br>REJECTED  <br>ACTION_REQUIRED | ENUM | Yes | Status of the loan   |
| rejectionDetails          | Array RejectionDetails   |      | No  | To be filled if the status of the loan is REJECTED. This object will have the details of why the loan was rejected                                 |
| actionRequired            | Array ActionRequired   |      | No  | To be filled if the status of the loan is ACTION_REQUIRED. This object captures the details of any action that the lender wants the borrower to do |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
}
```

```
"response": {
  "error": "0"
},
"loanId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
"loanApplicationStatus": "GRANTED"
}
```

Sample Response json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

### 3) Loan Status Request

HTTP Verb - GET

API Endpoint - /v1/loan/LoanStatusRequest

This API is invoked by the LSP when the response for Grant Loan Request was not received within the expected time

Request Payload

| Key      | type     | Validations | Mandatory | Description                            |
|----------|----------|-------------|-----------|--|
| metadata | Metadata |             | Yes       | Metadata specific to each API request. |

|        |              |             |     |   |
|--------|--------------|-------------|-----|---|
| loanId | Alphanumeric | Length : 35 | Yes | Unique identifier for the loan generated by LSP |
|--------|--------------|-------------|-----|---|

#### Response Payload

| Key | Type | Length | Mandatory | Description  |
|-----|------|--------|-----------|--|
| ack | Ack  |        | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "LSP123"
  },
  "loanId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb"
}
```

#### Sample Response json

```
{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 4) Loan Status Response

This method is called by the Lender as a response to Loan Status Request.

HTTP Verb - POST

API Endpoint - /v1/loan/loanStatusResponse

Request Payload

| Key               | Type                               | Validations | Mandatory | Description  |
|-------------------|------------------------------------|-------------|-----------|--|
| metadata          | Metadata                           |             | Yes       | Metadata specific to each API request.                       |
| response          | Response                           |             | Yes       | Status of response. Whether success or has encountered error |
| loanId            | Alphanumeric                       | Length : 35 | Yes       | Unique identifier for loan generated by LSP                  |
| loanApplicationId | Alphanumeric                       | Length : 35 | Yes       | Unique identifier for loan application generated by LSP      |
| status            | GRANTED<br> DEFAULTED<br>COMPLETED | ENUM        | Yes       | Status of the loan   |
| createdDate       | Date                               |             | Yes       | Date when loan was created                                   |
| startDate         | Date                               |             | Yes       | Date from when loan is active                                |
| endDate           | Date                               |             | Yes       | Date till when loan is active                                |



|              |   |      |     |   |
|--------------|---|------|-----|---|
| type         | CASHFLOW  <br>PERSONAL   HOME  <br>VEHICLE   BUSINESS | ENUM | Yes | Type of Loan  |
| borrower     | Borrower  |      | Yes | Borrower details shared by LSP during createLoanApplication                             |
| lender       | Lender  |      | Yes | Details about the lender  |
| collateral   | Array Collateral                                      |      | Yes | Details of the collateral used for the loan. Shared by LSP during createLoanApplication |
| guarantors   | Array Guarantor                                       |      | Yes | List of guarantors.   |
| applicants   | Array Applicant                                       |      | Yes | List of applicants  |
| terms        | LoanTerms   |      | Yes | Details of the terms of the loan  |
| disbursement | Disbursement  |      | Yes | Disbursement details of the loan  |
| repayment    | Repayment   |      | Yes | Repayment details of the loan   |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "loanId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "loanApplicationId": "54947df8-0e9e-4471-a2f9-9af509fb5889",
  "status": "GRANTED",
  "createdDate": "2019-12-30T13:55:00Z",
  "startDate": "2019-12-30T00:00:00Z",
  "endDate": "2020-03-01T00:00:00Z",
  "type": "CASHFLOW",
  "borrower": {
    "primaryId": "CPAA1234A",
    "primaryIdType": "PAN",
    "additionalIdentifiers": [],
    "name": "John doe",
    "category": "ORGANISATION",
    "contactDetails": [
      {
        "type": "PRIMARY",
        "phone": "7777777777",
        "email": "johndoe@defenterprises",
        "address": {
          "co": "<care of>",
          "hba": "<House/Building/Apartment>",
          "srl": "<Street/Road/Lane>",
          "landmark": "",

```

```
"als": "<Area/Locality/Sector>",
    "vtc": "<Village/Town/City>",
    "pincode": "",
    "po": "",
    "district": "",
    "state": "",
    "country": "",
    "uri": "<digital address>",
    "latitude": "",
    "longitude": ""
}
},
],
"documents": [
    {
        "format": "JSON",
        "reference": "3c986a71-15c2-46a3-bf20-810ed203e06d",
        "source": "GSTN",
        "sourceIdentifier": "GSTN",
        "type": "GSTN PROFILE",
        "isDataInline": true,
        "data":
"eyJzdGpDZCI6IkFQMDAzIiwibGdubSI6Ik1TIENPULBP UkFUSU9OIiwic3RqIjoiQkNQIEtPRElLT05EQSIsImR0eSI6IlJlZ3VsYXIiLCJjeGR0IjoiIiwiz3N0aW4iOiIwNUFCTlRzMzI5MFA4WkEiLCJuYmEiOlssiQm9uZGVkIFdhcmVob3VzZSI6IklVPVSAvIFNUUCAvIEVIVFAiLCJGYWN0b3J5IC8gTWFudWZhY3RlcmluZyIsIklucHV0IFNlcnZpY2UgRGldZHJpYnV0b3IgKElTRCKiLCJMZW FzaW5nIEJlc2luZXNzIl0sImxz dHVwZHQiOiIwNS8wMS8yMDE3IiwicmdkdCI6IjA1LzA1LzIwMTciLCJjdGIiOiIjG b3JlaWduIExMUCIsInN0cyI6IlByb3Zpc2lvbmFsIiw iY3RqQ2QiOiJBUDAwNCIsImN0aiI6IkJDUCBUSF VNTUFLVU5UQSIsInRyYW RlTmFtIjoiQUxUT04gUExBU1RJQyBQUklWQVRFIExURCIsImFkYW RyIjpbeyJ hZGRyIjpb7ImJubSI6IkVMUEhJTlNUT05FIEJSVSUXESU5HIiwic3 QiOiIxMCwgVkVFUiBO QVJJTUFOIFJPQUQiLCJs b2MiOiJGT1JU Iiw iYm5vIjoiMTAiLCJ zdGNkIjoiUmFqYXN0aGFuIiwizmxubyI6I jFTVCBGTE9PUiIsIm x0IjoiInZQuMjE3OS IsImxnIjoiMjc uMDIzOC
```

```
IsInBuY2QioiI0MDAwMDEifSwibnRyIjpbIldob2xlc2FsZSBCdXNpbmVzcyJdfV0sInB
yYWRyIjpw7ImFkZHIiOnsiYm5tIjoiS0FUR0FSQSBIT1VTRSIIsInN0IjoiMTUsIEwgSkFH
TU9lQU5EQVMgTUFSRyIsImxvYyI6Ik1BTEFCQVIGSElMTCIsImJubyI6IjUiLCJzdGNkI
joiTWFoYXJhc2h0cmEiLCJmbG5vIjoiNFRlIEZMT09SIiwibHQiOiI3NC4yMTc5IiwibG
ciOiIyNy4wMjM4IiwicG5jZCI6IjQwMDAwNiJ9LCJudHIiOlsvI2hvbGVzYWxlIEJlc2l
uZXNzIl19fQ=="
    }
  ]
},
"lender": {
  "primaryId": "AWWPA7645M",
  "primaryIdType": "PAN",
  "additionalIdentifiers": [],
  "name": "ABC Bank",
  "category": "ORGANISATION",
  "contactDetails": [],
  "documents": []
},
"collateral": [
  {
    "collateralPrimaryId": "INVOICE_<GSTIN>_<INVOICENUM>",
    "collateralPrimaryIdType": "GST_INVOICE | VIN <SOME VALID
REGISTRY>",
    "type": "GST_INVOICE",
    "additionalIdentifiers": [],
    "valuation": {
      "value": "",
      "currency": "",
      "date": "",
      "source": "GSTN"
    },
    "parties": [],
    "documents": [
```

```

        {
            "format": "JSON",
            "reference":
"3c986a71-15c2-46a3-bf20-810ed203e06d",
            "source": "GSTN",
            "sourceIdentifier": "GSTN",
            "type": "GSTN B2B INVOICE",
            "isDataInline": true,
            "data":
"eyJjaGtzdW0iOiJCQlVJQlVJVU1KS0tCSktHVVlGVEZHVVkiLCJlcGRieSI6IlMiLCJp
bnVtIjoiUzAwODQwMCIsIm1kdCI6IjI0LTExLTlwMTYiLCJ2YWwiOjcyOTI0OC4xNiwic
G9zIjoiMDYiLCJyY2hyZyI6Ik4iLCJldGluIjoiMDFBQUJDRTU1MDdSMVo0IiwiaW52X3
R5cCI6IlIiLCJjZmxhZyI6Ik4iLCJkaWZmX3BlcmNlbnQiOjAuNjUsIm9wZCI6IjIwMTY
tMTIiLCJpdGlzIjpbeyJudW0iOjEsIm10bV9kZXQiOjUsInR4dmFsIjoxMDAw
MCwiaWFtdCI6MzI1LCJjYW10IjowLCJzYW10IjowLCJjc2FtdCI6MTB9fV19"
        }
    ]
}

],
"guarantors": [],
"applicants": [],
"terms": {
    "requestedAmount": "50000",
    "currency": "INR",
    "account": "3439989899",
    "accountType": "50000",
    "sanctionedAmount": "50000",
    "interestType": "FIXED | FLOATING",
    "interestRate": "",
    "tenure": {
        "duration": "",
        "unit": ""
    }
},

```

```
"legalAgreement": {
  "type": "TEXT",
  "data": "<Base64 Encoded Data>"
},
"charges": {
  "prepayment": {
    "type": "FIXED_AMOUNT",
    "rate": "6",
    "applicableParameter": "TOTAL_LOAN_AMOUNT"
  },
  "bounce": {
    "type": "FIXED_AMOUNT",
    "amount": "3000"
  },
  "latePayment": {
    "type": "FIXED_AMOUNT",
    "amount": "3000"
  },
  "processing": {
    "type": "FIXED_AMOUNT",
    "amount": "3000"
  }
}
},
"disbursement": {
  "plan": {
    "id": "DP122324",
    "autoDisbursement": false,
    "scheduleType": "ONE TIME",
    "amount": "10000"
  },
  "accountDetails": {
    "type": "ACCOUNT",
```

```
    "data": {
      "accountNumber": "",
      "accountType": "CURRENT",
      "accountIFSC": ""
    }
  },
  "history": [
    {
      "paymentMethodType": "NEFT",
      "paymentMethodData": {},
      "amountDisbursed": "100.00",
      "disbursementDate": "2020-01-01",
      "financialYear": "2019-20",
      "receiptNo": "12345"
    }
  ]
},
"repayment": {
  "plan": {
    "id": "RP12334",
    "autoRepayment": false,
    "scheduleType": "ONE_TIME",
    "amount": "10000"
  },
  "methods": [
    {
      "type": "EMANDATE",
      "data": {
        "refNumber": "",
        "amount": "50000",
        "amountType": "MAX",
        "activeFrom": "",
        "expiryDate": ""
      }
    }
  ]
}
```

```
        "destinationAccount": {
            "accountDataType": "ACCOUNT",
            "data": {
                "accountType": "CURRENT",
                "accountIFSC": "IKCC0009",
                "maskedAccountNumber": "XXXXXXXXX9090",
                "accountNumber": "1112090999090"
            }
        },
        "sourceAccount": {
            "accountDataType": "VPA",
            "data": {
                "vpa": "abc@vpa"
            }
        }
    }
},
"history": [
    {
        "paymentMethodType": "NEFT",
        "paymentMethodData": {},
        "repaymentDate": "2020-01-01",
        "principalPaid": "100.00",
        "interestPaid": "18.00",
        "feePaid": "3.00",
        "penaltyPaid": "5.00",
        "receivedAmount": "126.00",
        "financialYear": "2019-20",
        "receiptNo": "12345"
    }
]
```



```
}
```

## Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## Repayment APIs (WIP)

### 1) Reconcile Repayment Request(WIP)

HTTP Verb - POST

API Endpoint - /v1/repayment/reconcileRepaymentRequest

This API is invoked by the LSP to inform the lender system about any repayments that the borrower has made through the LSP application. This data can be used by the lender to reconcile the repayment against the borrower's loan account.

#### Request Payload

| Key      | type         | Validations | Mandatory | Description                            |
|----------|--------------|-------------|-----------|--|
| metadata | Metadata     |             | Yes       | Metadata specific to each API request. |
| loanId   | Alphanumeric | Length : 35 | Yes       | UUID for the loan. Generated by LSP    |

|                   |                   |                                   |     |   |
|-------------------|-------------------|-----------------------------------|-----|---|
| type              | IMPS   NEFT   VPA | ENUM                              | Yes | Type of payment used for the repayment                    |
| data              | Json              |                                   | Yes | Details of the repayment transaction                      |
| amount            | String            | Min Length : 1<br>Max Length : 20 | Yes | The amount that was repaid. 2 digits precision            |
| installmentNumber | String            | Min Length : 1<br>Max Length : 10 | Yes | The installment number for which you are making repayment |

#### Response payload

| Key | type | Length | Mandatory | Description  |
|-----|------|--------|-----------|--|
| ack | Ack  |        | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "loanId" : "354c6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "type": "IMPS",
  "data": {
```

```

    "transactionReference": "Tx12120",
    "accountNo": "3232090999090",
    "IFSCCode": "BKCC0009"
  },
  "amount": "1550.00",
  "installmentNumber": "5"
}

```

#### Sample Response Json

```

{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

## 2) Reconcile Repayment Response(WIP)

HTTP Verb - POST

API Endpoint - /v1/repayment/reconcileRepaymentResponse

Response for Reconcile Repayment request initiated by lender

| Key      | type     | Validations | Mandatory | Description                            |
|----------|----------|-------------|-----------|--|
| metadata | Metadata |             | Yes       | Metadata specific to each API request. |

|               |                   |                                   |     |  |
|---------------|-------------------|-----------------------------------|-----|--|
| response      | Response          |                                   | Yes | Status of response. Whether success or has encountered error |
| loanId        | Alphanumeric      | Length : 35                       | Yes | UUID for the loan. Generated by LSP                          |
| type          | IMPS   NEFT   VPA | ENUM                              | Yes | Type of payment used for the repayment                       |
| data          | Json              |                                   | Yes | Details of the repayment transaction                         |
| status        | SUCCESS   FAILURE | ENUM                              | Yes | Status of the reconciliation                                 |
| failureReason | String            | Min Length : 1<br>Max Length : 50 | No  | Reason why the reconciliation failed                         |

#### Response Payload

| Key | type | Length | Mandatory | Description  |
|-----|------|--------|-----------|--|
| ack | Ack  |        | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "FIU123"
```

```

    },
    "response": {
        "error": "0"
    },
    "orgId": "LSP123",
    "loanId" : "354c6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "type": "IMPS",
    "data": {
        "transactionReference": "Tx12120",
        "accountNo": "3232090999090",
        "IFSCCode": "BKCC0009"
    },
    "status": "SUCCESS"
}

```

#### Sample Response Json

```

{
    "ack": {
        "error": "0",
        "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
        "timestamp": "2018-12-06T11:39:57.153Z"
    }
}

```

### 3) Get Repayment Plans Request

HTTP Verb - POST

API Endpoint - /v1/repayment/getRepaymentPlansRequest

This API sends a request to fetch the repayment plans that the lender system offers for a particular loan.

Request payload

| Key      | type         | Validations | Mandatory | Description                            |
|----------|--------------|-------------|-----------|--|
| metadata | Metadata     |             | Yes       | Metadata specific to each API request. |
| loanId   | Alphanumeric | Length : 35 | Yes       | UUID for Loan. Generated by LSP        |

#### Response Payload

| Key | type | Length | Mandatory | Description  |
|-----|------|--------|-----------|--|
| ack | Ack  |        | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "loanId" : "354c6822-d4bb-4eb1-9e1b-4996fbff8acb"
}
```

#### Sample Response Json

```
{
  "ack": {
```

```

    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

## 4) Get Repayment Plans Response

HTTP Verb - POST

API Endpoint - /v1/repayment/getRepaymentPlansResponse

This API sends back the list of repaymentplans to the LSP

### Request Payload

| Key            | type                 | Validations | Mandatory | Description  |
|----------------|----------------------|-------------|-----------|--|
| metadata       | Metadata             |             | Yes       | Metadata specific to each API request.                       |
| response       | Response             |             | Yes       | Status of response. Whether success or has encountered error |
| loanId         | Alphanumeric         | Length : 35 | Yes       | UUID for Loan. Generated by LSP                              |
| repaymentPlans | Array RepaymentPlans |             | Yes       | List of repayment plans offered by the lender                |

### Response Payload

| Key | type | Length | Mandatory | Description |
|-----|------|--------|-----------|-------------|
|-----|------|--------|-----------|-------------|

|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "response": {
    "error": "0"
  },
  "loanId" : "354c6822-d4bb-4eb1-9e1b-4996fbff8acb"
  "repaymentPlans": [
    {
      "id": "BKCCMSME10RP1",
      "autoRepayment": " Y",
      "scheduleType": "RECURRING",
      "frequency": "MONTHLY",
      "firstPaymentDate": "2018-12-06",
      "amount": "5000"
    }
  ]
}
```

### Sample Response Json

```
{
  "ack": {
```



```

    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

## 5) Update Repayment Plans Request

HTTP Verb - POST

API Endpoint - /v1/repayment/updateRepaymentPlanRequest

This API is invoked by the borrower to choose a different repayment plan for the loan.

### Request Payload

| Key             | type         | Validations | Mandatory | Description                                   |
|-----------------|--------------|-------------|-----------|---|
| metadata        | Metadata     |             | Yes       | Metadata specific to each API request.        |
| loanId          | Alphanumeric | Length : 35 | Yes       | UUID for Loan. Generated by LSP               |
| repaymentPlanId | String       | Length : 35 | Yes       | The new Repayment plan chosen by the Borrower |

### Response Payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "LSP123"
  },
  "loanId": "354c6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "repaymentPlanId": "BKCCMSME10RP1"
}
```

### Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 6) Update Repayment Plans Response

HTTP Verb - POST

API Endpoint - /v1/repayment/updateRepaymentPlanResponse

This API is invoked by the lender to inform the LSP about the status of the update repayment.

### Request Payload

| Key                 | type              | Validations     | Mandatory | Description  |
|---------------------|-------------------|-----------------|-----------|--|
| metadata            | Metadata          |                 | Yes       | Metadata<br>specific to each API request.                          |
| response            | Response          |                 | Yes       | Status of response. Whether<br>success or has encountered<br>error |
| loanId              | Alphanumeric      | Length :35      | Yes       | UUID for Loan. Generated by<br>LSP                                 |
| repaymentPlan<br>Id | Alphanumeric      | Length :35      | Yes       | The new Repayment plan<br>chosen by the Borrower                   |
| status              | SUCCESS   FAILURE | ENUM            | Yes       | Status of the update   |
| failureReason       | String            | Max Length :256 | No        | Reason why changing the<br>repayment plan failed                   |

### Response Payload

| Key | type |  | Mandatory | Description  |
|-----|------|--|-----------|--|
| ack | Ack  |  | Yes       | Acknowledgement block<br>indicating the receipt and<br>status of request |

### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "FIU123"
  },
  "response": {
    "error": "0"
  },
  "loanId": "354c6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "repaymentPlanId": "BKCCMSME10RP1",
  "status": "SUCCESS"
}
```

#### Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 7) Execute Mandate Request

HTTP Verb - POST

API Endpoint - /v1/repayment/executeMandateRequest

This API is invoked by the lender trigger the execution of a mandate that was created for the repayment of a loan. This API informs the LSP that the lender wants the money to be deducted from the borrowers account for repayment and starts the repayment via e-mandate process.

Request Payload

| Key                     | type         | Validations | Mandatory | Description  |
|-------------------------|--------------|-------------|-----------|--|
| metadata                | Metadata     |             | Yes       | Metadata specific to each API request.   |
| amount                  | String       |             | Yes       | Amount details for the mandate   |
| executeMandateRequestId | Alphanumeric | Length : 35 | Yes       | UUID for executing the mandate request. Generated by lender to track the status of the execute mandate request |
| loanId                  | Alphanumeric | Length : 35 | Yes       | UUID for the loan. Generated by Lender   |
| mandateReferenceNumber  | Alphanumeric | Length : 35 | Yes       | Reference Number for the mandate that was created for the repayment of Loan                                    |

## Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
```

```

    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "FIU123"
  },
  "amount": "5000.00"
  "executeMandateRequestId": "245c6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "loanId": "354c6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "mandateRefNumber": "Rf12312"
}

```

#### Sample Response Json

```

{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

## 8) Execute Mandate Response

HTTP Verb - POST

API Endpoint - /v1/repayment/executeMandateResponse

This API is invoked by the LSP to inform the lender about the status of whether the mandate execution was a success or not.

| Key      | type     | Validations | Mandatory | Description                            |
|----------|----------|-------------|-----------|--|
| metadata | Metadata |             | Yes       | Metadata specific to each API request. |

|                         |                               |             |     |  |
|-------------------------|-------------------------------|-------------|-----|--|
| response                | Response                      |             | Yes | Status of response. Whether success or has encountered error   |
| executeMandateRequestId | Alphanumeric                  | Length : 35 | Yes | UUID for executing the mandate request. Generated by lender to track the status of the execute mandate request |
| status                  | SUCCESS   FAILURE             | ENUM        | Yes | Status of repayment using the mandate  |
| transactionReference    | Alphanumeric                  | Length : 35 | No  | Reference Number generated for successful repayment transaction  |
| failureReason           | INSUFFICIENT FUNDS   TIME OUT | ENUM        | No  | Reason why the repayment using mandate failed  |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  }
}
```

```
    "orgId" : "FIU123"
  },
  "response": {
    "error": "0"
  },
  "executeMandateRequestId": "245c6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "status": "SUCCESS",
  "transactionReference": "Rf123123900"
}
```

Sample Response Json

```
{
  "ack": {
    "error": "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## Disbursement API

### 1) Trigger Disbursement Request

HTTP Verb - POST

API Endpoint - /v1/disbursement/triggerDisbursementRequest

This API is to be used when the user wants the money to be disbursed immediately.

Request Payload



| Key                        | type           | Validations | Mandatory | Description                                     |
|----------------------------|----------------|-------------|-----------|---|
| metadata                   | Metadata       |             | Yes       | Metadata specific to each API request.          |
| loanId                     | Alphanumeric   | Length : 35 | Yes       | UUID for the loan. Generated by Lender          |
| disbursementRequestId      | Alphanumeric   | Length : 35 | Yes       | UUID for disbursement request. Generated by LSP |
| disbursementAccountDetails | AccountDetails |             | No        | Account where the disbursement is to be done    |
| disbursementAmount         | AmountType     |             | Yes       | Amount to be disbursed                          |

## Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  }
}
```

```

    },
    "loanId" : "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "disbursementRequestId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "disbursementAccountDetails": {
        "type": "ACCOUNT",
        "data": {
            "accountNumber": "3432423432",
            "accountType": "CURRENT",
            "accountIFSC": "BKJJ23232"
        }
    },
    "disbursementAmount": {
        "amount": "10000",
        "currency": "INR"
    }
}

```

#### Sample Response Json

```

{
    "ack": {
        "error" : "0",
        "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
        "timestamp": "2018-12-06T11:39:57.153Z"
    }
}

```

## 2) Trigger Disbursement Response

HTTP Verb - POST

API Endpoint - /v1/disbursement/TriggerDisbursementResponse

This API is invoked by the lender to inform the status of the disbursement request.

#### Request Payload

| Key                   | type                                   | Validations | Mandatory | Description  |
|-----------------------|--|-------------|-----------|--|
| metadata              | Metadata                               |             | Yes       | Metadata specific to each API request.                       |
| response              | Response                               |             | Yes       | Status of response. Whether success or has encountered error |
| disbursementRequestId | Alphanumeric                           | Length : 35 | Yes       | UUID for the disbursement request. Generated by LSP          |
| transactionReference  | String                                 | Length : 35 | No        | Reference Id for the disbursement transaction                |
| status                | PENDING<br>DISBURSEMENT  <br>DISBURSED | ENUM        | Yes       | Status of the disbursement                                   |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request json

```
{
```

```

"metadata": {
  "version": "1.0",
  "timestamp": "2018-12-06T11:39:57.153Z",
  "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "orgId" : "FIU123"
},
"response": {
  "error": "0"
},
"disbursementRequestId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
"status": "DISBURSED",
"transactionReference": "Rf12123"
}

```

Sample Response json

```

{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

### 3) Get Disbursement Plans Request

HTTP Verb - POST

API Endpoint - /v1/disbursement/getDisbursementPlansRequest

This API is invoked by the LSP to get the list of disbursement plans provided by the lender for the loan

Request payload

| Key      | type         | Validations | Mandatory | Description                            |
|----------|--------------|-------------|-----------|--|
| metadata | Metadata     |             | Yes       | Metadata specific to each API request. |
| loanId   | Alphanumeric | Length : 35 | Yes       | UUID for Loan. Generated by LSP        |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId" : "LSP123"
  },
  "loanId" : "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb"
}
```

#### Sample Response Json

```
{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  }
}
```

```

    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

## 4) Get Disbursement Plans Response

HTTP Verb - POST

API Endpoint - /v1/disbursement/getDisbursementPlansResponse

This API is invoked by the lender to inform the LSP about the list of disbursement plans available for the loan

### Request Payload

| Key               | type                      | Validations | Mandatory | Description  |
|-------------------|---------------------------|-------------|-----------|--|
| metadata          | Metadata                  |             | Yes       | Metadata specific to each API request.                       |
| response          | Response                  |             | Yes       | Status of response. Whether success or has encountered error |
| loanId            | Alphanumeric              | Length : 35 | Yes       | UUID for Loan. Generated by LSP                              |
| disbursementPlans | Array<br>DisbursementPlan |             | Yes       | List of disbursement plans offered by the lender             |

### Response Payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "loanId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "disbursementPlans": [
    {
      "id": "BKCCMSME10DP1",
      "autoDisbursement": " Y",
      "scheduleType": "ONE TIME",
      "firstPaymentDate": "2018-12-06",
      "amount": "15000"
    }
  ]
}
```

### Sample Response Json

```
{
  "ack": {
```

```

    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

## 5) Update Disbursement Plans Request

HTTP Verb - POST

API Endpoint - /v1/disbursement/updateDisbursementPlansRequest

This API is invoked by the LSP to choose a different disbursement plan for the loan

### Request Payload

| Key                | type         | Validations | Mandatory | Description                                      |
|--------------------|--------------|-------------|-----------|--|
| metadata           | Metadata     |             | Yes       | Metadata specific to each API request.           |
| loanId             | Alphanumeric | Length : 35 | Yes       | UUID for Loan. Generated by LSP                  |
| disbursementPlanId | Alphanumeric | Length : 35 | Yes       | The new Disbursement plan chosen by the Borrower |

### Response Payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|



|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

### Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP1234"
  },
  "loanId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "disbursementPlanId": "BKCCMSME10DP1"
}
```

### Sample Response Json

```
{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 6) Update Disbursement Plans Response

HTTP Verb - POST

API Endpoint - /v1/disbursement/updateDisbursementPlanResponse

This API is invoked by the Lender to inform the LSP about the status of the update disbursement request.

#### Request Payload

| Key                | type              | Validations      | Mandatory | Description  |
|--------------------|-------------------|------------------|-----------|--|
| metadata           | Metadata          |                  | Yes       | Metadata<br><br>specific to each API request.                      |
| response           | Response          |                  | Yes       | Status of response. Whether<br>success or has encountered<br>error |
| loanId             | Alphanumeric      | Length : 35      | Yes       | UUID for Loan. Generated by<br>LSP                                 |
| disbursementPlanId | Alphanumeric      | Length : 35      | Yes       | The new disbursement plan<br>chosen by the Borrower                |
| status             | SUCCESS   FAILURE | ENUM             | Yes       | Status of the update   |
| failureReason      | String            | Max length : 256 | No        | Reason why changing the<br>disbursement plan failed                |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block<br>indicating the receipt and<br>status of request |

## Sample Request Json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "loanId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "disbursementPlanId": "BKCCMSME10DP1",
  "status": "SUCCESS"
}
```

## Sample Response Json

```
{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## Loan Dispute Management APIs

### 1) Raise Dispute Request

HTTP Verb - POST

API Endpoint - /v1/loan/dispute/raiseDisputeRequest

This API is invoked by the LSP to create a dispute in the lender system for an issue that is faced by the borrower.

#### Request Payload

| Key                  | type  | Validations                        | Mandatory | Description   |
|----------------------|---|------------------------------------|-----------|---|
| metadata             | Metadata  |                                    | Yes       | Metadata specific to each API request.                        |
| loanId               | Alphanumeric                                      | Length : 35                        | Yes       | UUID for Loan. Generated by LSP                               |
| disputeId            | Alphanumeric                                      | Length : 35                        | Yes       | UUID for the dispute. Generated by LSP                        |
| complaintCode        | AMOUNT NOT DISBURSED   REPAYMENT FAILURE   OTHERS | ENUM                               | Yes       | Complaint code for the issue being raised by the borrower     |
| complaintDescription | String  | Min Length : 1<br>Max Length : 256 | Yes       | Detailed description of the complaint code raised by borrower |

#### Response Payload

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|     |     |  |     |  |
|-----|-----|--|-----|--|
| ack | Ack |  | Yes | Acknowledgement block indicating the receipt and status of request |
|-----|-----|--|-----|--|

#### Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "loanId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "disputeId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "complaintCode": "AMOUNT_NOT_DISBURSED",
  "complaintDescription": "Amount not disbursed to the account yet"
}
```

#### Sample Response json

```
{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 2) Raise Dispute Response

This method is invoked by the lender once the Raise Dispute processing is done.

HTTP Verb - POST  
API Endpoint - /v1/loan/dispute/raiseDisputeResponse

#### Request Payload

| Key         | type   | Validations                            | Mandatory | Description  |
|-------------|--|--|-----------|--|
| metadata    | Metadata   |  | Yes       | Metadata specific to each API request.                       |
| response    | Response   |  | Yes       | Status of response. Whether success or has encountered error |
| disputeId   | Alphanumeric                                       | Length : 35                            | Yes       | UUID for the dispute.<br>Generated by LSP                    |
| status      | NEW   PROCESSING  <br>NEED_MORE_INFO  <br>RESOLVED | ENUM                                   | Yes       | Current status of the dispute                                |
| description | String   | Min Length : 1<br><br>Max Length : 256 | Yes       | Detailed description regarding the status                    |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

### Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "disputeId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "status": "NEED MORE INFO",
  "description": "Please provide the transaction details of repayment"
}
```

### Sample Response json

```
{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## 3) Update Dispute Request

HTTP Verb - POST

API Endpoint - /v1/loan/dispute/updateDisputeRequest

This API is invoked by the LSP to update the lender about the current status of the dispute.

## Request Payload

| Key                  | type   | Validations                            | Mandatory | Description   |
|----------------------|--|--|-----------|---|
| metadata             | Metadata   |  | Yes       | Metadata specific to each API request.                              |
| disputeId            | Alphanumeric   | Length : 35                            | Yes       | UUID for the dispute.<br>Generated by Lender                        |
| status               | NEW   PROCESSING  <br>NEED_MORE_INFO  <br>RESOLVED         | ENUM                                   | Yes       | Current status of the dispute                                       |
| complaintCode        | AMOUNT NOT<br>DISBURSED  <br>REPAYMENT FAILURE  <br>OTHERS | ENUM                                   | Yes       | Complaint code for the issue<br>being raised by the borrower        |
| complaintDescription | String   | Min Length : 1<br><br>Max Length : 256 | Yes       | Detailed description of the<br>complaint code raised by<br>borrower |

## Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block<br>indicating the receipt and<br>status of request |

## Sample Request json



```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "disputeId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "complaintCode": "AMOUNT_NOT_DISBURSED",
  "status": "RESOLVED",
  "complaintDescription": "Issue resolved"
}
```

Sample Response json

```
{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

#### 4) Update Dispute Response

This method is invoked by the lender once the Update Dispute processing is done.

HTTP Verb - POST

API Endpoint - /v1/loan/dispute/updateDisputeResponse

This API is invoked by the lender informing the LSP regarding the latest update regarding the dispute.

## Request Payload

| Key         | type   | Validations                            | Mandatory | Description  |
|-------------|--|--|-----------|--|
| metadata    | Metadata   |  | Yes       | Metadata specific to each API request.                       |
| response    | Response   |  | Yes       | Status of response. Whether success or has encountered error |
| disputeId   | Alphanumeric                                       | Length : 35                            | Yes       | UUID for the dispute.<br>Generated by LSP                    |
| status      | NEW   PROCESSING  <br>NEED_MORE_INFO  <br>RESOLVED | ENUM                                   | Yes       | Current status of the dispute                                |
| description | String   | Min Length : 1<br><br>Max Length : 256 | Yes       | Detailed description regarding the status                    |

## Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

## Sample Request json

```
{
```

```

"metadata": {
  "version": "1.0",
  "timestamp": "2018-12-06T11:39:57.153Z",
  "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "orgId": "FIU123"
},
"response": {
  "error": "0"
},
"disputeId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
"status": "NEED MORE INFO",
"description": "Please provide the transaction details of
repayment"
}

```

Sample Response json

```

{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}

```

## 5) Dispute Status Request

HTTP Verb - POST

API Endpoint - /v1/loan/dispute/disputeStatusRequest

This API is invoked by the LSP when it did not get a response from the lender within the expected time.

Request Payload

| Key       | type         | Validations | Mandatory | Description                               |
|-----------|--------------|-------------|-----------|---|
| metadata  | Metadata     |             | Yes       | Metadata specific to each API request.    |
| disputeId | Alphanumeric | Length : 35 | Yes       | UUID for the dispute.<br>Generated by LSP |

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "LSP123"
  },
  "disputeId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb"
}
```

#### Sample Response json

```
{
```

```
"ack": {
  "error" : "0",
  "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "timestamp": "2018-12-06T11:39:57.153Z"
}
```

## 6) Dispute Status Response

This API is invoked by the lender.

HTTP Verb - POST

API Endpoint - /v1/loan/dispute/disputeStatusResponse

Request Payload

| Key       | type   | Validations | Mandatory | Description  |
|-----------|--|-------------|-----------|--|
| metadata  | Metadata   |             | Yes       | Metadata specific to each API request.                       |
| response  | Response   |             | Yes       | Status of response. Whether success or has encountered error |
| disputeId | Alphanumeric                                       | Length : 35 | Yes       | UUID for the dispute.<br>Generated by LSP                    |
| status    | NEW   PROCESSING  <br>NEED_MORE_INFO  <br>RESOLVED | ENUM        | Yes       | Current status of the dispute                                |

|             |        |                                    |     |   |
|-------------|--------|------------------------------------|-----|---|
| description | String | Min Length : 1<br>Max Length : 256 | Yes | Detailed description regarding the status |
|-------------|--------|------------------------------------|-----|---|

#### Response Payload

| Key | type | Validations | Mandatory | Description  |
|-----|------|-------------|-----------|--|
| ack | Ack  |             | Yes       | Acknowledgement block indicating the receipt and status of request |

#### Sample Request json

```
{
  "metadata": {
    "version": "1.0",
    "timestamp": "2018-12-06T11:39:57.153Z",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "orgId": "FIU123"
  },
  "response": {
    "error": "0"
  },
  "disputeId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "status": "NEED MORE INFO",
  "description": "Please provide the transaction details of repayment"
}
```

## Sample Response json

```
{
  "ack": {
    "error" : "0",
    "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
    "timestamp": "2018-12-06T11:39:57.153Z"
  }
}
```

## Domain Object Specification

### Metadata

| Key       | type  | Validations                                  | Mandatory | Description   |
|-----------|---|--|-----------|---|
| version   | String  | Min Length :<br>1<br><br>Max Length:<br>6    | Yes       | Version of the API being used. NPCI may host multiple versions for supporting gradual migration. As of this specification, default production version is "1.0".                                 |
| timestamp | ISODateTime<br><br>YYYY-MM-DDThh:mm:ssZ+/-hh:mm (eg<br>1997-07-16T19:20:30+05:30)<br>where; YYYY = four-digit year MM = two-digit month (01=January, etc.) DD = two-digit day of month (01 through 31) hh = two digits of hour (00 through 23) (am/pm NOT allowed) mm = | Min Length :<br>1<br><br>Max Length :<br>255 | Yes       | Time of request from the creator of the message. API request time stamp. Since timestamp plays a critical role, it is highly recommended that devices are time synchronized with a time server. |

|         |  |   |     |  |
|---------|--|---|-----|--|
|         | two digits of minute (00 through 59) ss = two digits of second (00 through 59) Z +/- hh:mm = time zone designator (Z) followed by time zone difference from GMT in hours and minutes. THIS IS OPTIONAL. If not provided, it is assumed to be IST (+5.30) |   |     |  |
| traceId | Alphanumeric   | Length : 35                                 | Yes | Message identifier-used to correlate between the request and response. The unique identifier created by the originator of the message and will be used to correlate the response with the original request |
| orgId   | Alphanumeric   | Min Length :<br>1<br><br>Max Length :<br>35 | Yes | Unique identifier for the organization in the ecosystem. In case of LSPs it will LSP id, for lenders it will be the FIUId and so on  |

Sample json

```
{
  "version": "1.0",
  "orgId": "LSP123",
  "timestamp": "2018-12-06T11:39:57.153Z",
  "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb"
}
```

**Response**



This object is used to capture errors.

| Key   | type   | Validations | Mandatory | Description  |
|-------|--------|-------------|-----------|--|
| error | String | Length : 35 | Yes       | Errors in the current request received.If no errors are found, error = 0. For example, if a mandatory attribute is missing, error code should capture that |

## Borrower

| Key            | type                      | Validations     | Mandatory | Description  |
|----------------|---------------------------|-----------------|-----------|--|
| primaryIdType  | PAN   MOBILE   AADHAAR    | ENUM            | Yes       | Identifier Type for the borrower   |
| primaryId      | Alphanumeric              | Length : 35     | Yes       | Borrower unique identifier for the identifier type above   |
| category       | ORGANIZATION   INDIVIDUAL | ENUM            | Yes       | Category of the Borrower   |
| name           | String                    | Max Length : 50 | No        | Name of the borrower   |
| contactDetails | Array<br>ContactDetails   |                 | Yes       | ContactDetails for the borrower. If no data is there to be sent, an empty array block can be passed. |

|                       |                               |  |     |   |
|-----------------------|-------------------------------|--|-----|---|
| additionalIdentifiers | Array<br>AdditionalIdentifier |  | No  | Additional identifier details for the borrower  |
| documents             | Array Document                |  | Yes | Additional documents related to the borrower. If no data is there to be sent, an empty array block can be passed. |

For Bhim for Lending case: GST TaxPayer Profile will be pulled from Search Tax payer API. The schema for GSTN profile can be found in the Search Tax Payer API published in <https://developer.gst.gov.in/apiportal/common/others>

Sample json

```
{
  "primaryId": "CPAA1234A",
  "primaryIdType": "PAN",
  "additionalIdentifiers": [],
  "name": "John doe",
  "category": "ORGANISATION",
  "contactDetails": [
    {
      "type": "PRIMARY",
      "phone": "7777777777",
      "email": "johndoe@defenterprises",
      "address": {
        "co": "<care of>",
        "hba": "<House/Building/Apartment>",
        "srl": "<Street/Road/Lane>",
        "landmark": "",
        "als": "<Area/Locality/Sector>",
        "vtc": "<Village/Town/City>",
        "pincode": ""
      }
    }
  ]
}
```

```

        "po": "",
        "district": "",
        "state": "",
        "country": "",
        "uri": "<digital address>",
        "latitude": "",
        "longitude": ""
    }
}
],
"documents": []
}

```

## Applicant

| Key                      | type                      | Validations     | Mandatory | Description   |
|--------------------------|---------------------------|-----------------|-----------|---|
| primaryIdType            | PAN   MOBILE   AADHAAR    | ENUM            | Yes       | Identifier Type for the Applicant                         |
| primaryId                | Alphanumeric              | Length : 35     | Yes       | Applicant unique identifier for the identifier type above |
| category                 | ORGANIZATION   INDIVIDUAL | ENUM            | Yes       | Category of the Applicant                                 |
| name                     | String                    | Max Length : 50 | No        | Name of the Applicant                                     |
| relationshipWithBorrower | String                    | Max Length : 50 | Yes       | Relationship of the applicant with Borrower               |

|                       |                               |  |     |  |
|-----------------------|-------------------------------|--|-----|--|
| contactDetails        | Array<br>ContactDetails       |  | Yes | ContactDetails for the Applicant If no data is there to be sent, an empty array block can be passed.               |
| additionalIdentifiers | Array<br>AdditionalIdentifier |  | No  | Additional identifier details for the Applicant  |
| documents             | Array Document                |  | Yes | Additional documents related to the Applicant. If no data is there to be sent, an empty array block can be passed. |

Sample json

```
{
  "primaryId": "<PAN NO.>",
  "primaryIdType": "PAN | <SOME VALID REGISTRY>",
  "additionalIdentifiers": [
    {
      "key": "",
      "value": ""
    }
  ],
  "name": "",
  "category": "ORGANISATION | INDIVIDUAL",
  "relationshipWithBorrower": "",
  "contactDetails": [
    {
      "type": "PRIMARY | OTHER",
      "phone": "",
      "email": "",
      "address": {
```

```

        "hba": "<House/Building/Apartment>",
        "srl": "<Street/Road/Lane>",
        "landmark": "",
        "als": "<Area/Locality/Sector>",
        "vtc": "<Village/Town/City>",
        "pincode": "",
        "po": "",
        "district": "",
        "state": "",
        "country": "",
        "uri": "<digital address>",
        "latitude": "",
        "longitude": ""
    }
}
],
"documents": [
    {
        "format": "PDF/EXCEL/PNG/JSON",
        "reference": "3c986a71-15c2-46a3-bf20-810ed203e06d",
        "source": "FIP | USER ",
        "sourceIdentifier": "",
        "type": "PAN | AADHAAR | DRIVING_LICENSE | PASSPORT",
        "isDataInline": "true/false",
        "data": "<Base64 encoded data>"
    }
]
}

```

**Lender**

| Key                   | type                          | Validations                       | Mandatory | Description   |
|-----------------------|-------------------------------|-----------------------------------|-----------|---|
| primaryIdType         | PAN   MOBILE   AADHAAR   FIU  | ENUM                              | Yes       | Identifier Type for the lender  |
| primaryId             | Alphanumeric                  | Min Length : 1<br>Max Length : 20 | Yes       | Lender unique identifier for the identifier type above  |
| category              | ORGANIZATION   INDIVIDUAL     | ENUM                              | Yes       | Category of the Lender  |
| name                  | Alphanumeric                  | Max Length : 50                   | Yes       | Name of the lender  |
| additionalIdentifiers | Array<br>AdditionalIdentifier |                                   | Yes       | Additional identifier details for the lender. If no data is there to be sent, an empty array block can be passed. |
| contactDetails        | Array<br>ContactDetails       |                                   | Yes       | ContactDetails for the lender. If no data is there to be sent, an empty array block can be passed.                |
| documents             | Array Document                |                                   | Yes       | Additional documents related to the lender. If no data is there to be sent, an empty array block can be passed.   |

#### Sample json

```
{
  "primaryId": "AWWPA7645M",
  "primaryIdType": "PAN",
  "additionalIdentifiers": [],
  "name": "ABC Bank",
```

```

"category": "ORGANISATION",
"contactDetails": [
  {
    "co": "<care of>",
    "type": "PRIMARY",
    "phone": "8888888888",
    "email": "abc@abcbank",
    "address": {
      "hba": "<House/Building/Apartment>",
      "srl": "<Street/Road/Lane>",
      "landmark": "",
      "als": "<Area/Locality/Sector>",
      "vtc": "<Village/Town/City>",
      "pincode": "",
      "po": "",
      "district": "",
      "state": "",
      "country": "",
      "uri": "<digital address>",
      "latitude": "",
      "longitude": ""
    }
  }
],
"documents": []
}

```

## ContactDetails

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|         |                    |                                       |     |  |
|---------|--------------------|---------------------------------------|-----|--|
| type    | PRIMARY  <br>OTHER | ENUM                                  | Yes | Type of Contact. Whether<br>primary or others. |
| phone   | String             | Min Length :10<br><br>Max Length : 15 | Yes | Phone number                                   |
| email   | String             | Min Length : 3<br><br>Max Length : 50 | No  | Email address                                  |
| address | Address            |                                       | No  | Address  |

### Sample Json

```
{
  "type": "PRIMARY",
  "phone": "7777777777",
  "email": "johndoe@defenterprises",
  "address": {
    "co": "<Care of>",
    "hba": "<House/Building/Apartment>",
    "srl": "<Street/Road/Lane>",
    "landmark": "",
    "als": "<Area/Locality/Sector>",
    "vtc": "<Village/Town/City>",
    "pincode": "",
    "po": "",
    "district": "",
    "state": "",
    "country": "",
    "uri": "<digital address>",
  }
}
```



```

        "latitude": "",
        "longitude": ""
    }
}

```

## AdditionalIdentifier

| Key   | type         | Validations                      | Mandatory | Description                                    |
|-------|--------------|----------------------------------|-----------|--|
| key   | Alphanumeric | Min Length : 1<br>Max Length: 50 | Yes       | Additional key related to the entity.          |
| value | Alphanumeric | Min Length : 1<br>Max Length: 50 | Yes       | Value for the key in the context of the entity |

```

{
    "key": "123488888888",
    "value": "AADHAAR"
}

```

## Address

| Key | type   | Validations      | Mandatory | Description              |
|-----|--------|------------------|-----------|--------------------------|
| co  | String | Max Length : 100 | No        | Care of.                 |
| hba | String | Max Length : 255 | Yes       | House/Building/Apartment |
| srl | String | Max Length : 99  | Yes       | Street/Road/Lane         |

|           |        |                  |     |                             |
|-----------|--------|------------------|-----|-----------------------------|
| landmark  | String | Max Length : 50  | No  | Landmark                    |
| als       | String | Max Length : 50  | No  | Area/Locality/Sector        |
| vtc       | String | Max Length : 50  | No  | Village/Town/City           |
| pinCode   | String | Max Length : 10  | Yes | Pin Code                    |
| po        | String | Max Length : 10  | No  | Post Office                 |
| district  | String | Max Length : 50  | No  | District                    |
| state     | String | Max Length : 50  | Yes | State                       |
| country   | String | Max Length : 50  | Yes | Country                     |
| url       | String | Max Length : 100 | No  | Digital url for the address |
| latitude  | String | Max Length : 50  | No  | Latitude of the address     |
| longitude | String | Max Length : 50  | No  | Longitude of the address    |

Sample json

```
{
  "hba": "<House/Building/Apartment>",
  "srl": "<Street/Road/Lane>",
  "landmark": "",
  "als": "<Area/Locality/Sector>",
  "vtc": "<Village/Town/City>",
  "pincode": "",
  "po": "",
  "district": "",
  "state": "",
  "country": "",
  "uri": "<digital address>",
```

```
"latitude": "",  
"longitude": ""  
}
```

## Document

| Key              | type  | Validations                           | Mandatory | Description   |
|------------------|---|---------------------------------------|-----------|---|
| source           | AA   FIP   FIU  <br>FSR   USER  <br>GSTN            | ENUM                                  | Yes       | Source system from where data is coming. Source can be from AA ecosystem or from USER   |
| sourceIdentifier | Alphanumeric  | Min Length : 1<br><br>Max Length : 35 | Yes       | If source is in AA ecosystem, sourceIdentifier is the identifier in central registry. In case of User, it will be his unique identifier   |
| format           | DOC   IMAGE  <br>CSV  <br>ENCRYPTED  <br>JSON   XML | ENUM                                  | Yes       | Format of the data in documents   |
| reference        | String (UUID)                                       | Length : 35                           | Yes       | Unique identifier for a document which can be used by other objects for referencing a document. In case where isDataInline is false, reference number can be used to hit an external api to get the data. |
| type             | GSTN_B2B_INV<br>OICE                                | ENUM                                  | Yes       | Expandable enum. Includes fiTypes in AA ecosystem and   |

|              |   |                |     |  |
|--------------|---|----------------|-----|--|
|              | GST_PROFILE  <br>PAN   AADHAAR  <br>DRIVING_LICENSE   PASSPORT  <br>OTHER |                |     | any additional type of documents that can be added to the system later   |
| isDataInline | Boolean   |                | Yes | Indicates whether the data is actually present in the document block. If Yes, data field contains base 64 encoded version of the data. |
| data         | String  | Min Length : 1 | Yes | Base64 encoded string  |

Sample json including GSTN data about Borrower

```
{
  "source": "GSTN",
  "sourceIdentifier": "GSTN",
  "format": "JSON",
  "reference": "docref12",
  "type": "GST_PROFILE",
  "isDataInline": true,
  "data":
"eyJzdGpDZCI6IkFQMDAzIiwibGdubSI6Ik1TIENPULBP UkFUSU9OIiwic3RqIjoiQkNQ
IETtPRElLT05EQSIsImR0eSI6IlJlZ3VsYXIIiLCJjeGR0IjoiIiwic3N0aW4iOiIwNUFCT
lRZMzI5MFA4WkEiLCJuYmEiOlsiQm9uZGVkIFdhcmVob3VzZSI6IkVPVSAvIFNUUCAvIE
VIVFAiLCJGYWN0b3J5IC8gTWfudWZhY3R1cmIuZyIsIklucHV0IFNlcnZpY2UgRG1zdHJ
pYnV0b3JgKElTRCKiLCJmZWfzaW5nIEEJlc2luZXNzIl0sImxzdhVwZHQiOiIwNS8wMS8y
MDE3IiwicmdkdCI6IjA1LzA1LzIwMTciLCJjdGIiOiIjGbb3JlaWduIExMUCIsInN0cyI6I
lByb3Zpc2lvbmFsIiwic3RqQ2QiOiIjBUDAwNCIsImN0aiI6IkJDUCBUSFVNTUFLVU5UQS
IsInRyYWRlTmFtIjoiQUxUT04gUExBU1RJQyBQUklWQVRFIExURCIsImFkYWRyIjpbeyJ
hZGRyIjpb7ImJubSI6IkVMUEhJTlNUT05FIEJVSUxESU5HIiwic3QiOiIwMCwgVkvVFUiBO
```

```

QVJJTUFOIFJPQUQiLCJs2MiOiJGT1JUIiwiYm5vIjoiMTAiLCJzdGNkIjoiUmFqYXN0a
GFuIiwiZmxubyI6IjFTVCBGTE9PUiIsImx0IjoiNzQuMjE3OSIsImxnIjoiMjcucMDIzOC
IsInBuY2QiOiI0MDAwMDEifSwibnRyIjpbIldob2xlc2FsZSBCdXNpbmVzcyJdfV0sInB
yYWRyIjpb7ImFkZHIiOOnsiYm5tIjoiS0FUR0FSQSBIT1VTRSIInN0IjoiMTUsIEwgSkFH
TU9IQU5EQVMgTUFSRyIsImxvYyI6IklBTEFCQVIgSElMTCIsImJubyI6IjUiLCJzdGNkI
joiTWFoYXJhc2h0cmEiLCJmbG5vIjoiNFRIIEZMT09SIiwibHQiOiI3NC4yMTc5IiwibG
ciOiIyNy4wMjM4IiwicG5jZCI6IjQwMDAwNiJ9LCJudHIiOlsvI2hvbGVzYWxlIEJlc2l
uZXNzIl19fQ"
}

```

The schema for GSTN profile can be found in the Search Tax Payer API published in <https://developer.gst.gov.in/apiportal/common/others>

## Collateral

This block describes the credit instruments that you are using to raise a loan request. In Invoice financing, this block will capture invoices. For taking a loan against a house, this will have home registration document details.

| Key                     | type   | Validations | Mandatory | Description   |
|-------------------------|--|-------------|-----------|---|
| collateralPrimaryId     | Alphanumeric                                 | Length : 35 | Yes       | Primary Identifier for the collateral. Generated as collateralPrimaryIdType_collateralPrimaryId   |
| collateralPrimaryIdType | GST_INVOICE   VIN   <OTHER VALID REGISTRIES> | ENUM        | Yes       | Expandable ENUM. Type of collateral source. Will be Invoice in case of invoice based lending, vehicle identification number (VIN) for vehicle as collateral |

|                       |                                 |  |     |  |
|-----------------------|---------------------------------|--|-----|--|
| type                  | GST_INVOICE  <br>VEHICLE   HOME |  |     | Type of collateral.  |
| additionalIdentifiers | Array<br>AdditionalIdentifier   |  | Yes | Additional identifier for the collateral. If no data is there to be sent, an empty array block can be passed.  |
| valuation             | Valuation                       |  | No  | Valuation details of the collateral including value, source etc  |
| parties               | Array Party                     |  | Yes | Parties involved in the collateral. In case of home loan agreement, this can hold details of current owner and previous owner. If no data is there to be sent, an empty array block can be passed. |
| documents             | Array Document                  |  | Yes | Additional documents related to the collateral. If no data is there to be sent, an empty array block can be passed.  |

```

{
  "collateralPrimaryId": "INVOICE_<GSTIN>_<INVOICENUM>",
  "collateralPrimaryIdType": "GST_INVOICE | VIN <SOME VALID
REGISTRY>",
  "additionalIdentifiers": [
    {
      "key": "",
      "value": ""
    }
  ]
}

```

```
],
  "valuation": {
    "value": "",
    "currency": "",
    "date": "",
    "source": "GSTN"
  },
  "parties": [
    {
      "primaryId": "<PAN NO.>",
      "primaryIdType": "PAN | <SOME VALID REGISTRY>",
      "additionalIdentifiers": [
        {
          "key": "",
          "value": ""
        }
      ],
      "name": "",
      "category": "ORGANISATION | INDIVIDUAL",
      "relationshipWithCollateral": "",
      "contactDetails": [
        {
          "type": "PRIMARY | OTHER",
          "phone": "",
          "email": "",
          "address": {
            "hba": "<House/Building/Apartment>",
            "srl": "<Street/Road/Lane>",
            "landmark": "",
            "als": "<Area/Locality/Sector>",
            "vtc": "<Village/Town/City>",
            "pincode": "",
            "po": "",

```

```
        "district": "",
        "state": "",
        "country": "",
        "uri": "<digital address>",
        "latitude": "",
        "longitude": ""
    }
}
],
"documents": [
    {
        "format": "JSON",
        "reference":
"3c986a71-15c2-46a3-bf20-810ed203e06d",
        "source": "FIP | USER ",
        "sourceIdentifier": "",
        "type": "",
        "isDataInline": true,
        "data": "<Base64 encoded data>"
    }
]
}
],
"type": "GST_INVOICE",
"documents": [
    {
        "format": "JSON",
        "reference":
"3c986a71-15c2-46a3-bf20-810ed203e06d",
        "source": "GSTN",
        "sourceIdentifier": "GSTN",
        "type": "GSTN_B2B_INVOICE",
        "isDataInline": true,
```



```

      "data":
        "eyJzdGpDZCI6IkFQMDAzIiwibGdubSI6Ik1TIENPULBP UkFUSU9OIiwic3RqIjoiQkNQ
        IEtPRElLT05EQSIsImR0eSI6IlJlZ3VsYXIIiLCJjeGR0IjoiIiwiZ3N0aW4iOiIwNUFCT
        lRZMzI5MFA4WkEiLCJuYmEiOlsiQm9uZGVkIFdhcmVob3VzZSI6IkVPVSAvIFNUUCAvIE
        VIVFAiLCJGYWN0b3J5IC8gTWfudWZhY3R1cmIuZyIsIklucHV0IFNlcnZpY2UgRG1zdHJ
        pYnV0b3IgKElTRckiLCJMZWfzaW5nIEJlc2luZXNzIl0sImxzdhVwZHQiOiIwNS8wMS8y
        MDE3IiwicmdkdCI6IjA1LzA1LzIwMTciLCJjdGIIiOiJGb3JlaWduIExMUCIsInN0cyI6I
        lByb3Zpc2lvmfSIiwiiY3RqQ2QiOiJBUDAwNCIsImN0aiI6IkJDUCBUSFVNTUFLVU5UQS
        IsInRyYWRLTmFtIjoiQUxUT04gUExBU1RJQyBQUklWQVRfIExURCIsImFkYWRYIjpbeyJ
        hZGRyIjpb7ImJubSI6IkVMUEhJTlNUT05FIEJVSUxE5U5HIiwic3QiOiIxMCwgVkVFUiBO
        QVJJTUFOIFJPQUQiLCJsb2MiOiJGTlJUIiwiiYm5vIjoiMTAiLCJzdGNkIjoiUmFqYXN0a
        GFuIiwiiZmxubyI6IjFTVCBGTE9PUiIsImx0IjoiNzQuMjE3OSIsImxnIjoiMjcuMDIzOC
        IsInBuY2QiOiI0MDAwMDEifSwibnRyIjpbIldob2xlc2FsZSBCdXNpbmVzcyJdfV0sInB
        yYWRyIjpb7ImFkZHIiOlsiYm5tIjoiS0FUR0FSQSBITlVTRSI6InN0IjoiMTUsIEwgSkFH
        TU9IQU5EQVMgTUFSRyIsImxvYyI6Ik1BTEFCQVIgSElMTCIsImJubyI6IjUiLCJzdGNkI
        joiTWFoYXJhc2h0cmEiLCJmbG5vIjoiNFRlIEZMT09SIiwibHQiOiI3NC4yMTc5IiwibG
        ciOiIyNy4wMjM4IiwicG5jZCI6IjQwMDAwNiJ9LCJudHIiOlsiV2hvbGVzYWxlIEJlc2l
        uZXNzIl19fQ"
      }
    ]
  }

```

The schema for GSTN invoice can be found in the ANX1-GetB2B API published in <https://developer.gst.gov.in/apiportal/taxpayer/newreturns> .

However, for the first phase, we might actually be using the old returns api - GSTR1 - Get B2B Invoices. The documents.data field on decoding gives the B2B invoices return.

## Valuation

| Key      | type          | Validations     | Mandatory | Description   |
|----------|---------------|-----------------|-----------|---|
| value    | String        | Max Length : 20 | No        | Value of the collateral. In case of invoice this can have the invoice value. 2 digits precision |
| date     | Date          | Max Length : 20 | No        | Date when the valuation of collateral was done  |
| currency | CurrencyType  | Max Length : 20 | No        | Currency  |
| source   | GSTN   OTHERS | ENUM            | No        | Expandable ENUM. Source of the valuation.   |

```
{
  "value": "20000",
  "currency": "INR",
  "date": "2018-12-06",
  "source": "GSTN"
}
```

Parties

| Key           | type                         | Validations | Mandatory | Description                    |
|---------------|------------------------------|-------------|-----------|--------------------------------|
| primaryIdType | PAN   MOBILE   AADHAAR   FIU | ENUM        | Yes       | Identifier Type for the lender |

|                            |                               |                                   |     |   |
|----------------------------|-------------------------------|-----------------------------------|-----|---|
| primaryId                  | Alphanumeric                  | Min Length : 1<br>Max Length : 20 | Yes | Lender unique identifier for the identifier type above  |
| category                   | ORGANIZATION   INDIVIDUAL     | ENUM                              | Yes | Category of the Lender  |
| name                       | Alphanumeric                  | Max Length : 50                   | Yes | Name of the lender  |
| relationshipWithCollateral | Alphanumeric                  | Max Length : 50                   | Yes | Association with collateral. In case of invoice the 2 parties involved would be the buyer and seller              |
| additionalIdentifiers      | Array<br>AdditionalIdentifier |                                   | Yes | Additional identifier details for the lender. If no data is there to be sent, an empty array block can be passed. |
| contactDetails             | Array<br>ContactDetails       |                                   | Yes | ContactDetails for the lender. If no data is there to be sent, an empty array block can be passed.                |
| documents                  | Array Document                |                                   | Yes | Additional documents related to the lender. If no data is there to be sent, an empty array block can be passed.   |

```
{
  "primaryId": "<PAN NO.>",
  "primaryIdType": "PAN",
  "additionalIdentifiers": [
    {
      "key": "",
```

```
        "value": ""
    }
],
"name": "",
"category": "INDIVIDUAL",
"relationshipWithCollateral": "",
"contactDetails": [
    {
        "type": "PRIMARY",
        "phone": "",
        "email": "",
        "address": {
            "hba": "<House/Building/Apartment>",
            "srl": "<Street/Road/Lane>",
            "landmark": "",
            "als": "<Area/Locality/Sector>",
            "vtc": "<Village/Town/City>",
            "pincode": "",
            "po": "",
            "district": "",
            "state": "",
            "country": "",
            "uri": "<digital address>",
            "latitude": "",
            "longitude": ""
        }
    }
],
"documents": [
    {
        "format": "PNG",
        "reference": "3c986a71-15c2-46a3-bf20-810ed203e06d",
        "source": "USER",
```

```
        "sourceIdentifier": "USER",
        "type": "PAN",
        "isDataInline": true,
        "data": "<Base64 encoded data>"
    }
]
}
```

LoanTerms

| Key     | type        | Validations | Mandatory | Description  |
|---------|-------------|-------------|-----------|--|
| details | TermDetails |             | Yes       | Details of the basic terms of the loan                                       |
| charges | Charges     |             | Yes       | Details about the various penalties and charges involved as part of the loan |

```
{
"details": {
    "requestedAmount": "50000",
    "currency": "INR",
    "account": "3439989899",
    "accountType": "50000",
    "sanctionedAmount": "50000",
    "interestType": "FIXED | FLOATING",
    "interestRate": "",
    "tenure": {
        "duration": "",
        "unit": ""
    },
    "legalAgreement": {
```

```

        "type": "TEXT",
        "data": "<Base64 Encoded Data>"
    },
    "insuranceAmount": ""
},
"charges": {
    "prepayment": {
        "type": "FIXED_AMOUNT",
        "rate": "6",
        "applicableParameter": "TOTAL_LOAN_AMOUNT"
    },
    "bounce": {
        "type": "FIXED_AMOUNT",
        "amount": "3000"
    },
    "latePayment": {
        "type": "FIXED_AMOUNT",
        "amount": "3000"
    },
    "processing": {
        "type": "FIXED_AMOUNT",
        "amount": "3000"
    }
}
}

```

## Charges

| Key        | type          | Validations | Mandatory | Description  |
|------------|---------------|-------------|-----------|--|
| prepayment | ChargeDetails |             | Yes       | Details of the charges levied for prepayment of loan |

|             |               |  |     |   |
|-------------|---------------|--|-----|---|
| bounce      | ChargeDetails |  | Yes | Details of the charges levied when a repayment attempt by the borrower is not honored by bank. Eg: failure of a mandate execution |
| latePayment | ChargeDetails |  | Yes | Details of the charges levied when the borrower makes a late payment  |
| processing  | ChargeDetails |  | No  | Processing fees charged by the lender   |

```
{
  "prepayment": {
    "chargeType": "RATE_BASED",
    "data": {
      "rate": "6",
      "applicableParameter": "TOTAL_LOAN_AMOUNT"
    }
  },
  "bounce": {
    "chargeType": "FIXED_AMOUNT",
    "data": {
      "amount": "3000.00"
    }
  },
  "latePayment": {
    "chargeType": "FIXED_AMOUNT",
    "data": {
      "amount": "3000.00"
    }
  },
}
```

```

"processing": {
  "chargeType": "FIXED_AMOUNT",
  "data": {
    "amount": "3000.00"
  }
}
}

```

## ChargeDetails

| Key        | type                         | Validations | Mandatory | Description   |
|------------|------------------------------|-------------|-----------|---|
| chargeType | FIXED_AMOUNT<br>  RATE_BASED | ENUM        | Yes       | This field indicates whether the penalty is fixed or varies |
| data       | Json                         |             | Yes       | This object captures the details of the charges             |

The fields that can come inside data Json are the below.

|                     |  |                 |    |   |
|---------------------|--|-----------------|----|---|
| rate                | String   | Max Length : 10 | No | Annualized Rate of interest charged as penalty. 2 digits precision. Applicable only when type= RATE_BASED   |
| amount              | String   | Max Length : 20 | No | Fixed penalty charged   |
| applicableParameter | TOTAL_LOAN_AMOUNT  <br>OUTSTANDING_PAYABLE_AMOUNT  <br>EMI | ENUM            | No | The parameter on which rate is applied to arrive at the rate based charge. For example : If rate is 6% and applicable parameter is TOTAL_LOAN_AMOUNT, |



|  |                          |  |  |                                     |
|--|--------------------------|--|--|-------------------------------------|
|  | PREPAYMENT_P<br>RINCIPAL |  |  | penalty =<br>0.06*TOTAL_LOAN_AMOUNT |
|--|--------------------------|--|--|-------------------------------------|

```
{
  "chargeType": "RATE_BASE",
  "data": {
    "rate": "6",
    "applicableParameter": "TOTAL_LOAN_AMOUNT"
  }
}
```

**TermDetails**

| Key              | type                                | Validations                       | Mandatory | Description                           |
|------------------|-------------------------------------|-----------------------------------|-----------|---------------------------------------|
| requestedAmount  | String                              | Min Length : 1<br>Max Length : 20 | Yes       | Amount . 2 digits precision           |
| currency         | CurrencyType                        | Min Length : 1<br>Max Length : 20 | Yes       | Currency                              |
| account          | String                              | Max Length : 20                   | Yes       | Account where loan is to be disbursed |
| accountType      | SAVINGS  <br>CURRENT  <br>OVERDRAFT | ENUM                              | Yes       | Type of account                       |
| sanctionedAmount | String                              | Min Length : 1<br>MaxLength : 20  | Yes       | Loan Amount Approved by lender        |

|                |                     |                 |     |   |
|----------------|---------------------|-----------------|-----|---|
| interestType   | FIXED  <br>FLOATING | Max Length : 20 | Yes | Flag indicating if the interest rate is fixed or floating |
| interestRate   | String              | Max Length : 20 | Yes | Interest Rate for the loan. 2 digits precision            |
| tenure         | LoanTenure          |                 | Yes | Tenure details of the loan                                |
| legalAgreement | Loan Agreement      |                 | Yes | Loan agreement  |
| documents      | Array Document      |                 | No  | Additional documents regarding the loan terms             |
| charges        | Charges             |                 | No  | Penalties levied for issues with repayments               |

```
{
  "requestedAmount": "50000",
  "currency": "INR",
  "account": "3439989899",
  "accountType": "50000",
  "sanctionedAmount": "50.00",
  "interestType": "FIXED | FLOATING",
  "interestRate": "",
  "tenure": {
    "duration": "",
    "unit": ""
  },
  "legalAgreement": {
    "type": "TEXT",
    "data": "<Base64 Encoded Data>"
  },
  "documents": [],
```

```

"charges": {
  "prepayment": {
    "type": "RATE_BASED",
    "rate": "6",
    "applicableParameter": "TOTAL_LOAN_AMOUNT"
  },
  "bounce": {
    "type": "FIXED_AMOUNT",
    "amount": "3000"
  },
  "latePayment": {
    "type": "FIXED_AMOUNT",
    "amount": "3000"
  },
  "processing": {
    "type": "FIXED_AMOUNT",
    "amount": "3000"
  }
}
}

```

## LoanAgreement

| Key  | type       | Validations    | Mandatory | Description  |
|------|------------|----------------|-----------|--|
| type | TEXT   URL | ENUM           | Yes       | Indicates whether the agreement is shared directly as text or needs to be fetched from a url |
| data | String     | Min Length : 1 | Yes       | Base64 encoded string.   |

|  |  |  |  |   |
|--|--|--|--|---|
|  |  |  |  | <p>If type = text, this field will have the loan agreement in base 64 encoded format.</p> <p>If type = url, this field will have base 64 encoded url from where doc can be fetched.</p> |
|--|--|--|--|---|

**AmountType**

| Key      | type         | Validations                       | Mandatory | Description                 |
|----------|--------------|-----------------------------------|-----------|-----------------------------|
| amount   | String       | Min Length : 1<br>Max Length : 20 | Yes       | Amount . 2 digits precision |
| currency | CurrencyType | Min Length : 1<br>Max Length : 20 | Yes       | Currency                    |

Sample json

```
{
  "amount": "10000",
  "currency": "INR"
}
```

**CreditScoreType**

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|                  |                    |                                   |     |  |
|------------------|--------------------|-----------------------------------|-----|--|
| value            | String             | Min Length : 1<br>Max Length : 20 | Yes | Credit score given for the borrower by the LSP. 0-900 range  |
| source           | LSP  <br>PLATFORMS | ENUM                              | Yes | Source of the credit score. Can be LSP in case of FLDG. If it is not FLDG we still want to send credit score. (Maybe swiggy wants to send the score) |
| sourceIdentifier | String             | Min Length : 1<br>Max Length : 35 | Yes | Identifier of the source. Eg. SWIGGY for Restaurants   |

Sample json

```
{
  "value": "800",
  "sourceType": "LSP",
  "source": "SWIGGY"
}
```

## Guarantors

| Key                  | type                         | Validations                       | Mandatory | Description   |
|----------------------|------------------------------|-----------------------------------|-----------|---|
| uniqueIdentifierType | PAN  <br>MOBILE  <br>AADHAAR | ENUM                              | Yes       | Unique Identifier type of the guarantor.                        |
| uniqueIdentifier     | Alphanumeric                 | Min Length : 1<br>Max Length : 20 | Yes       | Identifier value of the guarantor for the above identifier type |

|                      |   |                                   |     |  |
|----------------------|---|-----------------------------------|-----|--|
| Name                 | Alphanumeric  | Min Length : 1<br>Max Length : 50 | No  | Name of the guarantor  |
| relationWithBorrower | FATHER  <br>MOTHER  <br>RELATIVE  <br>FRONT  <br>ORGANIZATION | ENUM                              | Yes | Relationship of the guarantor to the borrower  |
| share                | String  | Min Length : 1<br>Max Length : 20 | Yes | Incase of multiple guarantors, the share of the loan amount, guarantor is willing to guarantee for. 2 digits precision |
| documentRef          | Array<br>String   | Min Length : 1<br>Max Length : 35 | No  | Reference to documents that have been uploaded as proof for the guarantor  |
| data                 | Array<br>EntityDetails  |                                   | No  | Additional details regarding the guarantor obtained from multiple systems  |

Sample json

```
{
  "name": "John Doe",
  "uniqueIdentifierType": "PAN",
  "uniqueIdentifier": "AWWPA7645M",
  "relationWithBorrower": "Father",
  "share": "100",
  "documentRef": [
```

```

    " ",
    " "
  ],
  "data": []
}

```

## Rejection Details

| Key         | type   | Validations                           | Mandatory | Description  |
|-------------|--|---------------------------------------|-----------|--|
| reason      | FRAUD  <br>DOC_IRREGULARITI<br>ES  <br>LOW_CREDIT_SCOR<br>E   OTHERS | ENUM                                  | Yes       | Reason why the lender has decided not to make a loan offer to the borrower |
| description | String   | Min length : 1<br><br>Max Length : 99 | Yes       | Detailed description of the reason for rejection                           |

## Sample json

```

{
  "reason": "LOW_CREDIT_SCORE",
  "description": "Credit score below 600"
}

```

## Reference

This object is used when a reference needs to be made to another object that is sent as part of the request / response. For example, when the lender sends an Action Required block, it might refer to a document in the documents section

| Key    | type   | Validations                       | Mandatory | Description  |
|--------|--------|-----------------------------------|-----------|--|
| object | String | Min Length : 1<br>Max Length : 20 | Yes       | Name of the object in the request/reference to which the reference is made |
| value  | String | Min Length : 1<br>Max Length : 35 | Yes       | Reference number within the referred object                                |

Sample json

```
{
  "object": "documents",
  "value": "INVOICE_GSTN_INV2011"
}
```

### Action Required

| Key         | type                                     | Validations                       | Mandatory | Description  |
|-------------|--|-----------------------------------|-----------|--|
| actionType  | ADD_DOCUMENT   RESUBMIT_DOCUMENT   OTHER | ENUM                              | Yes       | Type of action expected from the borrower                                      |
| description | String                                   | Min Length : 1<br>Max Length : 99 | Yes       | Detailed description of the expected action                                    |
| reference   | Reference                                |                                   | No        | Reference to any documents uploaded as part of the loan request indicating the |



|  |  |  |  |                                   |
|--|--|--|--|-----------------------------------|
|  |  |  |  | document where action is required |
|--|--|--|--|-----------------------------------|

Sample json

```
{
  "actionType": "ADD_DOCUMENT",
  "description": "DL number not visible",
  "reference": {
    "object": "documents",
    "value": ""
  }
}
```

## Ack

Standard response block obtained for an Asynchronous API call.

| Key   | type   | Validations                           | Mandatory | Description  |
|-------|--------|---------------------------------------|-----------|--|
| error | String | Min Length : 1<br><br>Max Length : 35 | No        | Errors in the current request received.If no errors are found, error = 0. For example, if a mandatory attribute is |

|           |   |  |     |  |
|-----------|---|--|-----|--|
|           |   |  |     | missing, error code should capture that  |
| traceld   | Alphanumeric  | Min Length : 1<br><br>Max Length : 35  | Yes | Message identifier-used to correlate between the request and response. The unique identifier created by the originator of the message and will be used to correlate the response with the original request |
| timestamp | ISODateTime<br><br>YYYY-MM-DDThh:mm:ssZ+/- hh:mm (eg 1997-07-16T19:20:30+05:30)<br>where; YYYY = four-digit year<br>MM = two-digit month (01=January, etc.)<br>DD = two-digit day of month (01 through 31)<br>hh = two digits of hour (00 through 23) (am/pm NOT allowed)<br>mm = two digits of minute (00 through 59)<br>ss = two digits of second (00 through 59)<br>Z +/- hh:mm = time zone designator (Z) followed by time zone difference from GMT in hours and minutes.<br><br>THIS IS OPTIONAL. If not provided, it is assumed to be IST (+5.30) | Min Length : 1<br><br>Max Length : 255 | Yes | Time of request from the creator of the message. API request time stamp. Since timestamp plays a critical role, it is highly recommended that devices are time synchronized with a time server.            |

## Sample json

```
{
  "error": "0",
  "traceId": "e8cc6822-d4bb-4eb1-9e1b-4996fbff8acb",
  "timestamp": "2018-12-06T11:39:57.153Z"
}
```

## Offer

| Key          | type                | Validations                        | Mandatory | Description  |
|--------------|---------------------|------------------------------------|-----------|--|
| id           | Alphanumeric        | Min Length : 1<br>Max Length : 35  | Yes       | Unique identifier for the offer in the lending system  |
| validTill    | ISODateTime         | Min Length : 1<br>Max Length : 255 | Yes       | Time till which the offer from the lender is available   |
| terms        | LoanTerms           |                                    | Yes       | Details about the terms of the loan offer  |
| disbursement | DisbursementOptions |                                    | Yes       | Details about the disbursement provided by lender.   |
| repayment    | RepaymentOptions    |                                    | Yes       | Details about the repayment provided by lender.  |
| documents    | Array Document      |                                    | Yes       | Any other additional documents provided by the lender as part of the offer. If no data is there to be sent, an |

|  |  |  |  |                                  |
|--|--|--|--|----------------------------------|
|  |  |  |  | empty array block can be passed. |
|--|--|--|--|----------------------------------|

### Sample json

```
{
  "id": "e4eb7147-435a-4ee9-af45-f772e2335bce",
  "validTill": "2018-12-06T00:00:00.000Z",
  "terms": {
    "requestedAmount": "50000",
    "currency": "INR",
    "account": "3439989899",
    "accountType": "50000",
    "sanctionedAmount": "50000",
    "interestType": "FIXED | FLOATING",
    "interestRate": "",
    "tenure": {
      "duration": "",
      "unit": ""
    },
    "legalAgreement": {
      "type": "TEXT",
      "data": "<Base64 Encoded Data>"
    },
    "charges": {
      "prepayment": {
        "chargeType": "RATE_BASED",
        "data": {
          "rate": "6",
          "applicableParameter": "TOTAL_LOAN_AMOUNT"
        }
      }
    }
  }
}
```

```
    "bounce": {
      "chargeType": "FIXED_AMOUNT",
      "data": {
        "amount": "3000.00"
      }
    },
    "latePayment": {
      "chargeType": "FIXED_AMOUNT",
      "data": {
        "amount": "3000.00"
      }
    },
    "processing": {
      "chargeType": "FIXED_AMOUNT",
      "data": {
        "amount": "3000.00"
      }
    }
  },
  "disbursement": {
    "plans": [
      {
        "id": "DP122324",
        "autoDisbursement": false,
        "scheduleType": "ONE_TIME",
        "amount": "10000.00"
      }
    ],
    "accountDetails": {
      "accountDataType": "ACCOUNT",
      "data": {
        "accountType": "CURRENT",
```

```
        "maskedAccountNumber": "XXXXXXXXX9090"
    }
}
},
"repayment": {
    "plans": [
        {
            "id": "RP12334",
            "autoRepayment": "Y",
            "scheduleType": "ONE_TIME",
            "amount": "10000"
        }
    ],
    "methods": [
        {
            "type": "EMANDATE",
            "data": {
                "refNumber": "",
                "amount": "50000",
                "amountType": "MAX",
                "activeFrom": "",
                "expiryDate": "",
                "destinationAccount": {
                    "accountDataType": "ACCOUNT",
                    "data": {
                        "accountType": "CURRENT",
                        "accountIFSC": "IKCC0009",
                        "maskedAccountNumber": "XXXXXXXXX9090",
                        "accountNumber": "1112090999090"
                    }
                }
            },
            "sourceAccount": {
                "accountDataType": "VPA",
```

```

        "data": {
            "vpa": "abc@vpa"
        }
    }
}
]
}
}

```

## DisbursementPlan

| Key              | type  | Validations                       | Mandatory | Description   |
|------------------|---|-----------------------------------|-----------|---|
| id               | Alphanumeric  | Min Length : 1<br>Max Length : 35 | Yes       | Unique id for the disbursement plan in the lender system  |
| autoDisbursement | Boolean   | Min Length : 1<br>Max Length : 1  | Yes       | Flag indicating whether disbursement is automatic or user initiated   |
| scheduleType     | ONE_TIME  <br>RECURRING  <br>AS_PRESENTED                       | ENUM                              | Yes       | Type of schedule - can be one time, as_presented or recurring. AS_PRESENTED disbursement would be triggered by borrower |
| frequency        | WEEKLY  <br>MONTHLY  <br>QUARTERLY  <br>HALF YEARLY  <br>YEARLY | ENUM                              | No        | In case of a recurring disbursement, this field indicates how often the payment is disbursed                            |

|                       |             |                                    |     |   |
|-----------------------|-------------|------------------------------------|-----|---|
| firstDisbursementDate | ISODatetime | Min Length : 1<br>Max Length : 255 | No  | The first date on which disbursement is planned                         |
| amount                | String      | Min Length : 1<br>Max Length : 20  | Yes | Amount to be disbursed as per the disbursement plan. 2 digits precision |

```
{
  "Id": "BKCCMSME10DP1",
  "autoDisbursement": false,
  "scheduleType": "ONE TIME",
  "firstPaymentDate": "2018-12-06",
  "amount": "15000"
}
```

## RepaymentPlan

| Key           | type                                      | Validations                       | Mandatory | Description  |
|---------------|---|-----------------------------------|-----------|--|
| id            | Alphanumeric                              | Min Length : 1<br>Max Length : 35 | Yes       | Unique id for the repayment plan in the lender system            |
| autoRepayment | Boolean                                   | Min Length : 1<br>Max Length : 1  | Yes       | Flag indicating whether repayment is automatic or user initiated |
| scheduleType  | ONE_TIME  <br>RECURRING  <br>AS_PRESENTED | ENUM                              | Yes       | Type of schedule - can be one time, as_presented or recurring    |



|                  |   |                                       |     |   |
|------------------|---|---------------------------------------|-----|---|
| frequency        | WEEKLY  <br>MONTHLY  <br>QUARTERLY  <br>HALF YEARLY  <br>YEARLY | ENUM                                  | No  | In case of a recurring repayment, this field indicates how often the payment is disbursed |
| firstPaymentDate | Date  |                                       | No  | The first date on which payment is planned  |
| amount           | String  | Min Length : 1<br><br>Max Length : 20 | Yes | Amount to be repaid as per the repayment plan. 2 digits precision                         |

```
{  
  "Id": "BKCC10RP1",  
  "autoRepayment": false,  
  "scheduleType": "RECURRING",  
  "frequency": "MONTHLY",  
  "amount": "5000"  
}
```

**LoanDetails**

| Key                 | type         | Validations                           | Mandatory | Description   |
|---------------------|--------------|---------------------------------------|-----------|---|
| loanRequestedAmount | String       | Min Length : 1<br><br>Max Length : 20 | Yes       | Loan Amount requested by borrower. 2 digits precision |
| loanCurrency        | CurrencyType | Min Length : 1                        | Yes       | Currency of loan amount                               |

|                            |                               |                                  |     |   |
|----------------------------|-------------------------------|----------------------------------|-----|---|
|                            |                               | Max Length : 20                  |     |   |
| loanAccount                | Alphanumeric                  | Min Length : 1<br>MaxLength : 20 | Yes | Account Number in which the loan is to be disbursed   |
| loanAccountType            | SAVINGS   CURRENT   OVERDRAFT | ENUM                             | Yes | Type of account                                       |
| loanSanctionedAmount       | String                        | Min Length : 1<br>MaxLength : 20 | Yes | Loan Amount Approved by lender                        |
| loanPrincipalRemaining     | String                        | Min Length : 1<br>MaxLength : 20 | Yes | Principal to be paid as of now. 2 digits precision    |
| loanInterestRemaining      | String                        | Min Length : 1<br>MaxLength : 20 | Yes | Interest to be paid as of now. 2 digits precision     |
| loanCurrentInterestRate    | String                        | Min Length : 1<br>MaxLength : 20 | Yes | Current Interest Rate of the Loan. 2 digits precision |
| loanNextDisbursementAmount | String                        | Min Length : 1<br>MaxLength : 20 | Yes | Next Disbursement Amount. 2 digits precision          |
| loanNextDisbursementDate   | Date                          | Min Length : 1<br>MaxLength : 20 | No  | Next Disbursement Date                                |
| loanAmountDisbursed        | String                        | Min Length : 1<br>MaxLength : 20 | Yes | Amount Disbursed. 2 digits precision                  |

|                         |                           |                                  |     |  |
|-------------------------|---------------------------|----------------------------------|-----|--|
| loanRepaymentReceived   | String                    | Min Length : 1<br>MaxLength : 20 | Yes | Loan Amount Repaid. 2 digits precision                           |
| loanFeesPaid            | String                    | Min Length : 1<br>MaxLength : 20 | Yes | Processing Fees Paid. 2 digits precision.                        |
| loanPenaltyPaid         | String                    | Min Length : 1<br>MaxLength : 20 | Yes | Loan Penalty Paid. 2 digits precision                            |
| loanNextRepaymentAmount | String                    | Min Length : 1<br>MaxLength : 20 | Yes | Amount to be paid on next repayment date. 2 digits precision     |
| loanNextRepaymentDate   | Date                      | Min Length : 1<br>MaxLength : 20 | No  | Date on which next repayment is to be done                       |
| loanCurrentTenure       | LoanTenure                |                                  | Yes | Tenure of the loan amount  |
| loanInsurance           | LoanInsurance             |                                  | No  | Insurance details on which the loan is covered                   |
| loanLegalTerms          | String                    | Min Length : 1                   | Yes | Terms & Conditions provided by the lender in base64 encoded form |
| loanTermsHistory        | Array<br>LoanTermsHistory |                                  | Yes | Stores any change in loan interest rate or tenure                |

```
{
  "loanRequestedAmount": "100.00",
```

```
"loanCurrency": "INR",
"loanAccount": "BKCC12345",
"loanAccountType": "SAVINGS",
"loanSanctionedAmount": "100.00",
"loanPrincipalRemaining": "100.00",
"loanInterestRemaining": "18.00",
"loanCurrentInterestRate": "18",
"loanNextDisbursementAmount": "100.00",
"loanNextDisbursementDate": "2020-01-01",
"loanAmountDisbursed": "0.00",
"loanRepaymentReceived": "0.00",
"loanFeesPaid": "0.00",
"loanPenaltyPaid": "0.00",
"loanNextRepaymentAmount": "100.00",
"loanNextRepaymentDate": "2020-02-01",
"loanCurrentTenure": {
  "duration": "1",
  "unit": "MONTH"
},
"loanInsurance": {
  "policyNumber": "INS12345",
  "amount": "10.00",
  "maxCoverage": "100.00",
  "type": "GENERAL INSURANCE",
  "legalTerms": "<Base64Data Encoded>"
},
"loanLegalTerms": "<Base64Data Encoded>",
"loanTermsHistory": [
  {
    "interest": "18",
    "tenure": {
      "duration": "1",
      "unit": "MONTH"
    }
  }
]
```

```

    },
    "effectiveDate": "2020-01-01"
  }
]
}

```

## LoanTenure

| Key      | type               | Validations                       | Mandatory | Description                                  |
|----------|--------------------|-----------------------------------|-----------|--|
| duration | String             | Min length : 1<br>Max Length : 10 | Yes       | Duration of the loan amount                  |
| unit     | DAY   MONTH   YEAR | ENUM                              | Yes       | Unit in which the loan duration is mentioned |

```

{
  "duration": "1",
  "unit": "MONTH"
}

```

## LoanInsurance

| Key          | type   | Validations    | Mandatory | Description             |
|--------------|--------|----------------|-----------|-------------------------|
| policyNumber | String | Min Length : 1 | Yes       | Insurance Policy Number |

|             |                                   |                                   |     |  |
|-------------|-----------------------------------|-----------------------------------|-----|--|
|             |                                   | Max Length : 50                   |     |  |
| amount      | String                            | Min Length : 1<br>Max Length : 50 | Yes | Premium amount paid by the borrower. 2 digits precision      |
| maxCoverage | String                            | Min Length : 1<br>Max Length : 50 | Yes | Maximum amount covered by the insurance. 2 digits precision  |
| type        | GENERAL   LIFE  <br>AUTO   HEALTH | ENUM                              | Yes | Type of insurance  |
| legalTerms  | String                            | Min Length : 1                    | Yes | Terms & Conditions provided by the insure encoded in base64r |

```
{
  "policyNumber": "INS12345",
  "amount": "10.00",
  "maxCoverage": "100.00",
  "type": "GENERAL INSURANCE",
  "legalTerms": "<Base64Data Encoded>"
}
```

LoanTermsHistory

| Key | type | Validations | Mandatory | Description |
|-----|------|-------------|-----------|-------------|
|-----|------|-------------|-----------|-------------|

|               |            |                                   |     |   |
|---------------|------------|-----------------------------------|-----|---|
| interest      | String     | Min Length : 1<br>Max Length : 10 | Yes | Loan interest rate as on the effective date. 2 digits precision |
| tenure        | LoanTenure | Min Length : 1<br>MaxLength : 20  | Yes | Tenure of the loan amount as on the effective date              |
| effectiveDate | Date       | Min Length : 1<br>Max Length : 10 | Yes | Date on which the interest and tenure is effective              |

```
{
  "interest": "18",
  "tenure": {
    "duration": "1",
    "unit": "MONTH"
  },
  "effectiveDate": "2020-01-01"
}
```

### TriggerDisbursement

| Key                | type                   | Validations                       | Mandatory | Description                                |
|--------------------|------------------------|-----------------------------------|-----------|--|
| disbursementType   | IMMEDIATE  <br>DELAYED | ENUM                              | Yes       | Will be Immediate for this use-case        |
| disbursementAmount | String                 | Min Length : 1<br>Max Length : 20 | Yes       | Amount to be disbursed. 2 digits precision |

```
{
```

```

"disbursementAccount": {
  "type": " IMPS",
  "data": {
    "accountNo": "3232090999090",
    "accountType": "CURRENT",
    "IFSCCode": "BKCC0009"
  }
},
"disbursementType": "IMMEDIATE",
"disbursementAmount": "15000"
}
}

```

## DisbursementHistory

| Key               | type                 | Validations                       | Mandatory | Description   |
|-------------------|----------------------|-----------------------------------|-----------|---|
| paymentMethodType | IMPS   NEFT  <br>VPA | Min Length : 1<br>Max Length : 20 | Yes       | Payment method type through which lender wants to disburse amount                               |
| paymentMethodData | JSON                 |                                   | Yes       | Payment method details of the lender account type through which lender wants to disburse amount |
| amountDisbursed   | String               | Min Length : 1<br>Max Length : 20 | Yes       | Total amount disbursed by lender. 2 digits precision  |
| disbursementDate  | Date                 | Min Length : 1<br>Max Length : 20 | Yes       | Date when the amount is disbursed by lender   |



|               |        |                                   |     |  |
|---------------|--------|-----------------------------------|-----|--|
| financialYear | String | Min Length : 1<br>Max Length : 20 | Yes | Financial year when the amount is disbursed. Example - YYYY-YY 2019-20 |
| receiptNo     | String | Min Length : 1<br>Max Length : 35 | Yes | Receipt no of the transactions   |

```
{
  "paymentMethodType": "NEFT",
  "paymentMethodData": {},
  "amountDisbursed": "100.00",
  "disbursementDate": "2020-01-01",
  "financialYear": "2019-20",
  "receiptNo": "12345"
}
```

## RepaymentHistory

| Key               | type                 | Validations    | Mandatory | Description  |
|-------------------|----------------------|----------------|-----------|--|
| paymentMethodType | IMPS   NEFT  <br>VPA | ENUM           | Yes       | Payment method type of borrower through which he will repay                |
| paymentMethodData | JSON                 |                | Yes       | Payment method details of the borrower account through which he will repay |
| repaymentDate     | Date                 | Min Length : 1 | Yes       | Date when the amount is paid by borrower                                   |

|                |        |                                   |     |   |
|----------------|--------|-----------------------------------|-----|---|
|                |        | Max Length : 20                   |     |   |
| principalPaid  | String | Min Length : 1<br>Max Length : 20 | Yes | Principal paid by the borrower. 2 digits precision                  |
| interestPaid   | String | Min Length : 1<br>Max Length : 20 | Yes | Interest paid by the borrower. 2 digits precision                   |
| feePaid        | String | Min Length : 1<br>Max Length : 20 | Yes | Fees paid by the borrower. 2 digits precision                       |
| penaltyPaid    | String | Min Length : 1<br>Max Length : 20 | Yes | Penalty paid by the borrower. 2 digits precision                    |
| receivedAmount | String | Min Length : 1<br>Max Length : 20 | Yes | Total amount paid by borrower. 2 digit precision                    |
| financialYear  | String | Min Length : 1<br>Max Length : 20 | Yes | Financial year when the amount is repaid. Example - YYYY-YY 2019-20 |
| receiptNo      | String | Min Length : 1<br>Max Length : 35 | Yes | Receipt no of the transactions                                      |

```
{
  "paymentMethodType": "NEFT",
  "paymentMethodData": {},
  "repaymentDate": "2020-01-01",
  "principalPaid": "100.00",
  "interestPaid": "18.00",
```

```

    "feePaid": "3.00",
    "penaltyPaid": "5.00",
    "receivedAmount": "126.00",
    "financialYear": "2019-20",
    "receiptNo": "12345"
  }

```

## AcceptedOffer

| Key                | type            | Validations                       | Mandatory | Description  |
|--------------------|-----------------|-----------------------------------|-----------|--|
| id                 | Alphanumeric    | Min Length : 1<br>Max Length : 35 | Yes       | UUID for the Offer that is accepted by borrower.<br>Generated by Lender          |
| repaymentPlanId    | Alphanumeric    | Min Length : 1<br>Max Length : 35 | Yes       | UUID for the repayment plan chosen from the list of plans provided by lender.    |
| disbursementPlanId | Alphanumeric    | Min Length : 1<br>Max Length : 35 | Yes       | UUID for the disbursement plan chosen from the list of plans provided by lender. |
| repayment          | RepaymentOption |                                   | No        | Mandate details for the accepted offer   |

```

{
  "id": "e4eb7147-435a-4ee9-af45-f772e2335bce",
  "repaymentPlanId": "RP12323",
  "disbursementPlanId": "DP12234",
  "repayment": {
    "methods": [
      {

```

```
    "type": "EMANDATE",
    "data": {
      "refNumber": "Rf122232",
      "amount": "50000",
      "amountType": "MAX",
      "activeFrom": "2020-01-01",
      "expiryDate": "2020-04-01",
      "destinationAccount": {
        "accountDataType": "ACCOUNT",
        "data": {
          "accountType": "CURRENT",
          "accountIFSC": "IKCC0009",
          "maskedAccountNumber": "XXXXXXXX9090",
          "accountNumber": "1112090999090"
        }
      },
      "sourceAccount": {
        "accountDataType": "VPA",
        "data": {
          "vpa": "abc@vpa"
        }
      }
    }
  ]
}
```

## Disbursement

| Key            | type                | Validations | Mandatory | Description  |
|----------------|---------------------|-------------|-----------|--|
| plan           | DisbursementPlan    |             | Yes       | Disbursement Plan for the loan.                    |
| accountDetails | AccountDetails      |             | Yes       | Account Details where the loan should be disbursed |
| history        | DisbursementHistory |             | No        | History of Disbursement                            |

### Sample json

```
{
  "plan": {
    "id": "DP122324",
    "autoDisbursement": "Y",
    "scheduleType": "ONE TIME",
    "amount": "10000"
  },
  "accountDetails": {
    "type": "ACCOUNT",
    "data": {
      "accountNumber": "",
      "accountType": "CURRENT",
      "accountIFSC": ""
    }
  },
  "history": [
    {
      "paymentMethodType": "NEFT",
```

```

        "paymentMethodData": {},
        "amountDisbursed": "100.00",
        "disbursementDate": "2020-01-01",
        "financialYear": "2019-20",
        "receiptNo": "12345"
    }
]
}

```

## Repayment

| Key            | type                     | Validations | Mandatory | Description                                       |
|----------------|--------------------------|-------------|-----------|---|
| plan           | RepaymentPlan            |             | Yes       | Repayment Plan for the loan                       |
| accountDetails | AccountDetails           |             | No        | Account Details from where repayment will be done |
| methods        | Array<br>RepaymentMethod |             | No        | Repayment methods set for the loan                |
| history        | RepaymentHistory         |             | No        | History of Repayment                              |

```

{
    "plans": {
        "id": "RP12334",
        "autoRepayment": "Y",
        "scheduleType": "ONE_TIME",
        "amount": "10000"
    }
}

```

```
,
"methods": [
  {
    "type": "EMANDATE",
    "data": {
      "refNumber": "",
      "amount": "50000",
      "amountType": "MAX",
      "activeFrom": "",
      "expiryDate": "",
      "destinationAccount": {
        "accountDataType": "ACCOUNT",
        "data": {
          "accountType": "CURRENT",
          "accountIFSC": "IKCC0009",
          "maskedAccountNumber": "XXXXXXXX9090",
          "accountNumber": "1112090999090"
        }
      },
    },
    "sourceAccount": {
      "accountDataType": "VPA",
      "data": {
        "vpa": "abc@vpa"
      }
    }
  }
],
"history": [
  {
    "paymentMethodType": "NEFT",
    "paymentMethodData": {},
    "repaymentDate": "2020-01-01",
```

```

        "principalPaid": "100.00",
        "interestPaid": "18.00",
        "feePaid": "3.00",
        "penaltyPaid": "5.00",
        "receivedAmount": "126.00",
        "financialYear": "2019-20",
        "receiptNo": "12345"
    }
]
}

```

## Mandate

| Key                   | type                     | Validations                       | Mandatory | Description   |
|-----------------------|--------------------------|-----------------------------------|-----------|---|
| refNumber             | String                   | Max Length : 35                   | No        | Reference number of the e-mandate                           |
| amount                | String                   | Min Length : 1<br>Max Length : 20 | Yes       | Amount for which the e-mandate needs to be configured       |
| amountType            | EXACT   MAX              |                                   | Yes       | While taking a mandate, this describes the nature of amount |
| paymentInstrumentType | EMANDATE   ELIEN   ENACH | ENUM                              | Yes       | Type of mandate based repayment                             |



|                    |                        |                                   |     |  |
|--------------------|------------------------|-----------------------------------|-----|--|
| sourceAccount      | AccountDetails<br>Data |                                   | Yes | Source account from where the repayment amount is paid |
| destinationAccount | AccountDetails<br>Data |                                   | Yes | Destination account where the repayment is credited    |
| activeFrom         | Date                   | Min Length : 1<br>Max Length : 20 | No  | Date from which the e-mandate becomes active           |
| expiryDate         | Date                   | Min Length : 1<br>Max Length : 20 | No  | Date when the e-mandate expires                        |

```
{
  "refNumber": "Rf232223",
  "amount": "3000",
  "amountType": "MAX",
  "activeFrom": "",
  "expiryDate": "",
  "paymentInstrumentType": "EMANDATE",
  "paymentInstrumentData": {
    "destinationAccount": {
      "accountDataType": "ACCOUNT",
      "data": {
        "accountType": "CURRENT",
        "accountIFSC": "IKCC0009",
        "maskedAccountNumber": "XXXXXXXX9090",
        "accountNumber": "1112090999090"
      }
    },
    "sourceAccount": {
      "accountDataType": "VPA",
      "data": {
```

```
        "vpa": "abc@vpa"
    }
}
}
```

**AccountDetails**

| Key  | type                   | Validations | Mandatory | Description  |
|------|------------------------|-------------|-----------|--|
| type | ACCOUNT  <br>VPA       | ENUM        | Yes       | This suggests what kind of data is expected for account details in the data object |
| data | AccountDetails<br>Data |             | Yes       |  |

**AccountDetailsData**

| Key                 | type                                | Validations     | Mandatory | Description              |
|---------------------|-------------------------------------|-----------------|-----------|--------------------------|
| accountType         | CURRENT  <br>SAVINGS  <br>OVERDRAFT | ENUM            | No        | Type of the account      |
| accountIFSC         | String                              | Max Length : 20 | No        | IFSC code of the account |
| accountNumber       | String                              | Max Length : 20 | No        | Account Number           |
| vpa                 | String                              | Max Length : 50 | No        | Virtual Payment Address  |
| maskedAccountNumber | String                              |                 | No        | Masked account details   |

```
{
  "accountType": "CURRENT",
  "maskedAccountNumber": "XXXXXXXXX9090"
}
```

## RepaymentOption

| Key     | type                      | Validations | Mandatory | Description                              |
|---------|---------------------------|-------------|-----------|--|
| plans   | Array<br>RepaymentPlan    |             | No        | Repayment options provided by the lender |
| methods | Array<br>RepaymentMethods |             | No        | Details of the repayment methods         |

## DisbursementOption

| Key            | type                      | Validations | Mandatory | Description                              |
|----------------|---------------------------|-------------|-----------|--|
| plans          | Array<br>DisbursementPlan |             | Yes       | Repayment options provided by the lender |
| accountDetails | AccountDetails            |             | Yes       | Mandate details for the loan             |

## Repayment Methods

| Key  | type                        | Validations | Mandatory | Description   |
|------|-----------------------------|-------------|-----------|---|
| type | EMANDATE  <br>ELIEN   ENACH | ENUM        | Yes       | Type of repayment method chosen                                 |
| data | Json                        |             | Yes       | Parameters for the repayment method which varies based on type. |

For type = EMANDATE , data object will have the structure of Mandate Domain Object.

## LspInfo

| Key     | type   | Validations | Mandatory | Description                                    |
|---------|--------|-------------|-----------|--|
| lspld   | String | Length: 35  | Yes       | Unique identifier for the lsp in the ecosystem |
| version | String | Length: 35  | Yes       | Version of the lsp                             |
| appName | String | Length: 35  | Yes       | Package name of the app                        |

```
"lspInfo": {  
  "lspId": "<AA can identify the LSP based on this>",  
  "version": "<version of LSP>",  
  "appName": "<Package name of the app>"
```

```
}
```

## Error Codes

The Errors have been classified into Generic Error codes which capture high level

| SI<br>N<br>o | Error<br>Code  | Description                                  | Parameter  | Error Message   |
|--------------|----------------|--|--|---|
| 1            | GEN00<br>1     | Mandatory Attribute<br>missing               | Missing Attribute  | Mandatory Attribute<br>orgld is missing                 |
| 2            | GEN00<br>2     | Value provided not in list                   | Value Provided,<br>Attribute for which value<br>was provided | Process is not a valid<br>value for Status              |
| 3            | GEN00<br>3     | No Record exists                             | Attribute Name,Value<br>Provided                             | No LoanId exists with<br>value 10090909                 |
| 4            | ERR_P<br>H_01  | Mobile Number should<br>have 10 or 12 digits | Attribute Name   | Invalid phone number<br>specified for<br>Mobilenumber   |
| 5            | ERR_P<br>AN_01 | PAN number not in<br>specified format.       | Attribute Name   | Invalid PAN Number<br>specified for<br>uniqueIdentifier |
|              |                |  |  |   |