



**RAJASTHAN**  
**HACKATHON**  
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**HACKATHON  
INTEGRATION DOCUMENT**

## BRIEF

Government of Rajasthan (GoR) is organizing IT Hackathon 2017 on the theme, "Skills for employability". The state government recognizes the power of creative thinkers in wealth creation and empowerment of technology. We are committed to create a comprehensive ecosystem where innovators would grow, prosper and form a significant part of the mainstream economy.

Rajasthan IT Hackathon 2017, envisaged as a two day event is one of its kind initiative for promotion of Information Technology. The objective of Hackathon is to give a platform to enterprising youth, startups & entrepreneurs across the nation and use their out-of-the-box thinking on Bhamashah, e-Mitra and Blockchain.

What are the key takeaways?

Opportunity to work on platforms like Bhamashah, e-Mitra and Blockchain  
The top three winning teams will earn a contract with Department of Information Technology & Communication, Government of Rajasthan worth Rs.15 Lacs, Rs.10 Lacs and Rs.7.5 Lacs respectively.

Note: Rajasthan Government/Department of Information Technology & Communications employees cannot participate in the Hackathon

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## **Bhamashah Consolidated Web Services Document**



# **भामाशाह योजना**

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## **Preface**

Bhamashah consolidate webservices developed to share the beneficiary information from Bhamashah to departments and vice versa. Their primary objectives are to map the Bhamashah Family/members entitlements and status of benefit.

Below web services are developed to cater above functionalities.

1. Bhamashah Family Member Information sharing Service
2. Bhamashah and schemeentitlement Mapping Service
3. Benefit Due (Accrual) Service
4. Benefit Transfer Service

## Service 1: Bhamashah Family Member Information sharing Service

### 1.Objective

To share Bhamashah family member's personal, family and entitlement details as per requested parameter.

### 2.Staging URL:

<http://164.100.222.243/Service/Action/Action.wsdl>

### 3.Request Description

#### 3.1Input parameters:

Bhamashah family member information would be shared based on below parameters:

##### 3.1.1 Client-Id or X-IBM-Client-Id:

Client-Id would be generated for each scheme and would be shared by DoIT&C.  
I.e. Client-Id = 3e0001f1-5aa5-4a99-abc7-581d69051z99

##### 3.1.2 Scheme Name:

Pass the scheme name for the "scheme"input parameter as shared by DoIT&C.  
scheme=<scheme name>

##### 3.1.3Bhamashah Family members Information Flag:

Bhamashah family member's information would be shared based on Information flag as per below:

Flag Name	Information Type	Information Flag
P	Bhamashah family member's Personal detail (like name, age, etc). <personalInfo></personalInfo>	infoFlag="P"
PF	Bhamashah family member Personal and Family level detail (like address, etc). <personalInfo></personalInfo> and <family></family>	infoFlag="PF"
PE	Bhamashah family member Personal and Entitlements detail (like pension number etc.). <personalInfo></personalInfo> <entitlementInfo></entitlementInfo>	infoFlag="PE"
PFE	Bhamashah family member, Personal, Family and Entitlement details. <personalInfo></personalInfo> <family></family> <entitlementInfo></entitlementInfo>	infoFlag="PFE"

**3.1.4 Beneficiary Information under request XML parameter:**  
 Beneficiary information would be shared based on parameter in request xml as per below table.

Sr. No	Parameter	Format	Data Type	Description	Remarks
1	BhamashahAck ID	1406-WWP4-28084	15 Characters	Beneficiary has enrolled in Bhamashah but Family Card not received yet.	Bhamashah Family detail would be provided based on enrolment id <entitlementInfo></entitlementInfo>
2	Bhamashah Family ID	WXBOBVN	7Characters	Beneficiary has Bhamashah Family Card	Bhamashah Family detail would be provided based on Bhamashah Family ID.
3	BhamashahAck ID and Aadhaar ID	1406-WWP4-28084 and 853406161520	15 characters and 12 digit	Beneficiary has enrolled in Bhamashah and Aadhar id is available.	Bhamashah Family member only detail would be provided based on enrolment id and Aadhaar id
4	Bhamashah Family ID and Aadhar ID	WXBOBVN and 853406161520	7 characters and 12 digit	Beneficiary has Bhamashah Family Card id and Aadhaar Detail	Bhamashah Family member detail would be provided based on family id and Aadhaar id

**3.1.4.1 Sample request XML for the above parameter:**  
 reqXml="<request XML>"

Sr. No	Bhamashah member search parameter	Search Parameter Tag(<request XML>)
1	BhamashahAck Id	<pre>&lt;root&gt; &lt;Info&gt; &lt;familyId&gt;&lt;/familyId&gt; &lt;ackId&gt;2034-X4UV-00000&lt;/ackId&gt; &lt;aadharId&gt;&lt;/aadharId&gt; &lt;/Info&gt; &lt;/root&gt;</pre>
2	Bhamashah Family Id	<pre>&lt;root&gt; &lt;Info&gt; &lt;familyId&gt;ABCXYZ&lt;/familyId&gt; &lt;ackId&gt;&lt;/ackId&gt; &lt;aadharId&gt;&lt;/aadharId&gt; &lt;/Info&gt; &lt;/root&gt;</pre>
3	BhamashahAck ID and Aadhar ID	<pre>&lt;root&gt; &lt;Info&gt; &lt;familyId&gt;&lt;/familyId&gt; &lt;ackId&gt;2034-X4UV-00000&lt;/ackId&gt; &lt;aadharId&gt;400000000004&lt;/aadharId&gt; &lt;/Info&gt; &lt;/root&gt;</pre>
4	BhamashahFamily Id with Aadhar Id	<pre>&lt;root&gt; &lt;Info&gt; &lt;familyId&gt;ABCXYZ&lt;/familyId&gt; &lt;ackId&gt;&lt;/ackId&gt; &lt;aadharId&gt;412356454654&lt;/aadharId&gt; &lt;/Info&gt; &lt;/root&gt;</pre>

• **BhamashahAck ID:** It is a 15 character temporary id provided to beneficiary at the time of enrolment in Bhamashah. After due verification process Bhamashah family id is generated. Hence Bhamashah Family id should be given preference for fetching information from Bhamashah instead of acknowledgement id.  
Bhamashah acknowledgement id should be used for the period till family id is not generated.  
Sample Bhamashah Acknowledgement Id's

- 1207-CN0V-24567
- 1207-HOTX-20756

• **Bhamashah Family ID:** It is 7 character id provided to beneficiary after due verification process. It displays on the Bhamashah card.

Sample Bhamashah Family Id's

- WDBBCCK
- WDBFUUK

#### 4. Response Description:

Beneficiary information would be shared based on request parameters passed in request xml as per below table.

##### 4.1 Sample Response XML Template for infoFlag="PFE"

```
<root>
<requestId>test#2711</requestId>
<cmsg></cmsg>
<personalInfo>
<member>
<ackId>9999-TEJO-00220</ackId>
<familyId>VOZJCWV</familyId>
<nameEng>Dhupa</nameEng>
<nameHnd>ଧୂପା</nameHnd>
<gender>Female</gender>
<fnameEng>Samaliya</fnameEng>
<fnameHnd>ସାମଲିୟା</fnameHnd>
<mnameEng>Puni</mnameEng>
<mnameHnd>ପୁଣୀ</mnameHnd>
<snameEng>Prabhu</snameEng>
<snameHnd>ପ୍ରଭୁ</snameHnd>
<dob>01/10/1945</dob>
<mid>0</mid>
<aadhar>987792506051</aadhar>
<eid></eid>
```

---

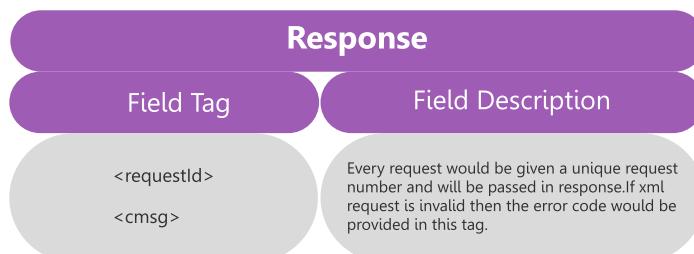
```
<mobile></mobile>
<acc>32648100001761</acc>
<bankName>BANK OF BARODA</bankName>
<ifsc>BARB0TARHAT</ifsc>
<voterId>KFX/6011735</voterId>
<panNo></panNo>
<passport></passport>
<dINo></dINo>
<email></email>
<qualification>illiterate</qualification>
<relationTyp>Self</relationTyp>
</member>
<member>
<ackId>9999-TEJO-00220</ackId>
<familyId>VOZJCWV</familyId>
<nameEng>Prabhu</nameEng>
<nameHnd>ପ୍ରଭୁ</nameHnd>
<gender>Male</gender>
<fnameEng>MadhauLal</fnameEng>
<fnameHnd>ମାଧୁଲାଳ</fnameHnd>
<mnameEng>Vasanti</mnameEng>
<mnameHnd>ବସନ୍ତୀ</mnameHnd>
<snameEng>Dhupa</snameEng>
<snameHnd>ଧୂପା</snameHnd>
<dob>01/10/1947</dob>
<mid>93520899</mid>
<aadhar>364696266899</aadhar>
<eid></eid>
<mobile></mobile>
<acc></acc>
<bankName></bankName>
<ifsc></ifsc>
<voterId>KFX/1161764</voterId>
<panNo></panNo>
<passport></passport>
<dINo></dINo>
<email></email>
<qualification>illiterate</qualification>
<relationTyp>Husband/wife</relationTyp>
</member>
</personalInfo>
<family>
```

```

<familydetail>
<addressHnd>87, नागौर</addressHnd>
<addressEng>87, Nagaur</addressEng>
<caste>कोली</caste>
<annlIncome>Less than 5000</annlIncome>
<landType></landType>
<landCat>28</landCat>
<livSince>20</livSince>
<gasConn></gasConn>
<gasAgency></gasAgency>
</familydetail>
</family>
<entitlementInfo>
<entDetail>
<bhamashahId>9999-TEJO-00220</bhamashahId>
<mid>0</mid>
<mnregaNo></mnregaNo>
<bplNo></bplNo>
<ppoNo></ppoNo>
<rsby></rsby>
<rationCardNo>007672600015</rationCardNo>
<rationCardCat>APL</rationCardCat>
<isNfsa>Yes</isNfsa>
</entDetail>
<entDetail>
<bhamashahId>9999-TEJO-00220</bhamashahId>
<mid>93520899</mid>
<ppoNo></ppoNo>
</entDetail>
</entitlementInfo>
</root>

```

#### 4.2 Response XML Template Description:



## Response

Field Tag	Field Description
<familyId>	Family Id
<nameEng>	Acknowledgement Id
<nameHnd>	Name in English
<gender>	Name in Hindi Gender (Male/Female)
<fnameEng>	Father Name in English
<fnameHnd>	Father Name in Hindi
<mnameEng>	Mother Name in English
<mnameHnd>	Mother Name in Hindi
<snameEng>	Spouse Name in English
<snameHnd>	Spouse Name in Hindi
<dob>	DOB
<aadhar>	Aadhar
<eid>	EID
<acc>	Account Number
<bankName>	Bank Name
<ifsc>	IFCS code
<micr>	MICR Code
<mobile>	Mobile Number
<relationTyp>	Relationship Type
<qualification>	Qualification
<panNo>	PAN Card Number
<voterId>	Voter ID Card Number
<email>	Email Id
<mid>	MID
<passport>	Passport No.
<dlNo>	Driving License

## Response

Field Tag	Field Description
-----------	-------------------

<address>	Address (HOUSE NO/ STREET/ LANDMARK/ AREA/ DISTRICT/ TEHSIL/ VILLAGE / GRAM PANCHAYAT/ WARD NUMBER/ MUNICIPALITY/ POST OFFICE/ PIN CODE)
<caste>	Caste Group SC/ ST/ OBC/ GENERAL
<annIncome>	ANNUAL INCOME
<landType>	Land Type
<landCat>	Land Category
<livSince>	Living Since year
<gasConn>	Gas connection
<gasAgency>	Gas Agency

## Response

Field Tag	Field Description
-----------	-------------------

<bhamashahId>	Bhamashah Family/ Acknowledgement Id
<mid>	Member Id
<mnregaNo>	MNREGA Number
<bplNo>	BPL Number
<ppoNo>	Pension PPO Number
<rsby>	RSBY/BSBY Number
<rationCardNo>	Ration Card Number
<rationCardCat>	Ration Care Category (APL/ BPL/ANTYODAYA)
<isNfsa>	NFSA Status

Note: First <entDetail> tag under <entitlementInfo> is for Bhamashah HOF and contains family specific entitlement details. Rest <entDetail> tags are for the Bhamashah members and contains the individual entitlement details.

#### 4.3 Error Message and Error condition:

Error Code	Field Tag	Field Description
101	Scheme	If Scheme name is null or not valid
110	FamilyId	If Family Id exists and it's length is not equal to 7 characters.
110	Acknowledgement Id	If Aadhar exists and its length is not equal to 12 digit.
107	Aadhar Number	If Acknowledgement Id exists and it's length is not equal to 15 characters
111	Request XML format	If request xml format is not valid
112	Any other error	If any fatal error occurs
115	InfoFlag	If info Flag value is not in the existing values (P, PF, PE and PFE).
116	No data found	If no data found under the given criteria

### Service 2: Bhamashah and Scheme Entitlement Mapping Service

#### 1. Objective

Link the scheme entitlement in Bhamashah family/member profile.

#### 2. Staging URL

<http://164.100.222.243/Service/Action/Action.wsdl>

#### 3. Request Description

##### 3.1 Input parameters:

To share the Beneficiary members details pass the below request parameter:

###### 3.1.1 Client-Id or X-IBM-Client-Id:

Provide the client id shared by DoIT&C when use the services on the live environment.

I.e. Client-Id = 3e0001f1-5aa5-4a99-abc7-581d69051z99

###### 3.1.2 Scheme Name:

Provide the scheme name for the "scheme" input parameter as shared by DoIT&C.

scheme=<scheme name>

###### 3.1.3 Beneficiary Information under request Xml parameter:

For entitlement mapping request, provide beneficiary information in request xml.

reqXml=<request XML>

Request XML Template:

```
<root>
<Mapping>
<entitlementId>1414</entitlementId>
<entitlementMemId>1</entitlementMemId>
<bhamashahId>YEQIWBG</bhamashahId>
    <bhamashahMemId>0</bhamashahMemId>
</Mapping>
</root>
```

### 3.2 Requested XML parameter description:

Field Name	Description	Format	Remarks
Entitlement Id	Beneficiary Entitlement id. This should not be null	As per department's beneficiary id format	Its length should be equal or less than 50 character.
Entitlement Member Id	Pass beneficiary member id for schemes where schemes have beneficiary family detail.	As per department's beneficiary member id format	Its length should be equal or less than 50 character.
Bhamashah Id	Use family Id if it is generated and received in Bhamashah family member info service else use acknowledgement id. This value should be same as received in Bhamashah family member info service. It should not be null.	WXBOBVN / 1406-WWP4-28084	If family id length=7 and if ack id length=15. As provided by the Bhamashah service
Bhamashah member id	This should be same as received in Bhamashah family member info service	8000006	Length should be less than or equal to 10.

### 4 Response Description:

Beneficiary scheme entitlement update on Bhamashah profile status would be sent in response.

#### 4.1 Response XML Template

```
<root>
<requestId>schemename#1083</requestId>
<cmsg/>
<entitlement>
<entitlementId>1414</entitlementId>
<entitlementMemId>1</entitlementMemId>
<isSaved>Y</isSaved>
<msg/>
</entitlement>
</root>
```

#### 4.2 Response XML Template Description:

1. Request id: A unique request id would be generated by the Bhamashah service for the further correspondence. Department should store this information.
2. cmsg tag: If scheme name is not valid or request xml format is not valid (as per request template) then request xml will not be processed further and appropriate error code will be send in cmsg tag.
3. EntitlementId and EntitlementMemId: This is same entitlement id and Entitlement member id on which request is made.
4. isSaved: Response xml contains each records success or failure status. If it successfully saved the isSavedvalue pass "Y" and it fails "N".
5. msg: In case of failure error message code <msg/> contains the error code. In case of multiple error code will be separated by "," i.e. <msg>104,106</msg>

#### 4.3 Error Message and Error condition:

Error Code	Field Name	Error Condition
101	Scheme	If Scheme name is null or not valid
103	Entitlement ID	1. If Entitlement ID is null or 2. If Entitlement ID exists but its length is greater than 50
110	Bhamashah ID	It should have Family Id (length=7) or Acknowledge Id (length=15. It is invalid if it doesn't exist in the Bhamashah.
110	Bhamashah member id	Bhamashah member id is invalid if it doesn't exist in the Bhamashah.
111	Request XML format	If request xml format (undefined prototype) is not valid
112	Any other error	If any fatal error occurs
122	Entitlement Member ID	If entitlement member Id exists and length is greater than 50
129	Duplicate Record	If duplicate mapping of Bhamashah Id and Bhamashah member ID with entitlement Id and entitle member id

### Service 3: Benefit Due (Accrual) Service

#### 1. Objective:

Link the beneficiary "due payment" details in the Transaction Mapper.

#### 2. Staging URL:

<http://164.100.222.243/Service/Action/Action.wsdl>

#### 3. Request Description

##### 1.1 Input parameters:

To share the due payments information Pass the two request parameter:

###### 1.1.1 Client-Id or X-IBM-Client-Id:

Provide the client Id shared by DoIT&C when use the services on the live environment.

I.e. Client-Id = 3e0001f1-5aa5-4a99-abc7-581d69051z99

###### 1.1.2 Scheme Name:

Provide the scheme name for the "scheme" input parameter as shared by DOIT &C.

scheme=<scheme name>

### 1.1.3 Beneficiary Information under request XML parameter:

Provide request xml for "reqXml" parameter.

reqXml = "<Request XML>"

Request XML Template:

```
<root>
<Accrual>
<entitlementId>RJ-1212121</entitlementId>
<entitlementMemId></entitlementMemId>
<bhamashahId>WWEHASB</bhamashahId>
<bhamashahMemId>0</bhamashahMemId>
<transactionId>23232</transactionId>
<dueDate>01/04/2015</dueDate>
<dueAmount>800</dueAmount>
</Accrual>
</root>
```

## 1.2 Due Payment information under requested XML:

Request XML Fields	Description
Entitlement Id	Unique Id provided to beneficiary for a scheme. It should not be null
Entitlement Member Id	Pass beneficiary member id for the family Member (individual member) scheme.
Bhamashah Id	This should have Family Id or Acknowledge Id. Use Family Id if it generated else use acknowledge id. It should be same as received in Bhamashah family member info.
Bhamashah member id	Bhamashah member id. It should be same as received in Bhamashah family member info.
Transaction Id:	Unique transaction id. Pass same transaction id when share Its payment transfer details under Benefit Transfer Service. It should not be null.
Due Date	Due date of the payment (DD/MM/YYYY). It should not be null. • (DD/MM/YYYY). It should not be null.
Due Amount	Due Amount. It should not be null and should be a number

---

## 4. Response Description

### 2.1 Response XML Template

```
<root>
<requestId> schemename#1476</requestId>
<cmsg></cmsg>
<accrual>
<transactionId>RJ-1212121</transactionId>
<isSaved>Y</isSaved>
<msg></msg>
</accrual>
</root>
```

### 2.2 Response XML Template Description:

1. Request Id: Unique request id generated by the Bhamashah service for the further correspondence. Department should store this information.
2. cmsg tag: If scheme name is not valid or request xml format is not valid (as per request template ) then request xml will not be processed further and appropriate error code will be send in cmsg tag.
3. transaction Id: This is same transaction id on which request is made.
4. isSaved: Response xml contains each records success or failure status. If it successfully saved the isSaved value passes "Y" and it fails "N".
5. msg: In case of failure error message code <msg/> contains the error code. In case of multiple error code will be separated by "," i.e. <msg>104,106</msg>

## 2.3 Error Message and Error condition:

Error Code	Field Name	Error Condition
101	Scheme	If Scheme name is null or not valid
102	Transaction id	1. If transaction id is null or 2. If transaction id is not null and length is greater than 30
103	Entitlement ID	1. If Entitlement ID is null or 2. If Entitlement ID exists but its length is greater than 50
110	Bhamashah ID	It should have Family Id (length=7) or Acknowledge Id (length=15). It is invalid if it doesn't exist in the Bhamashah.
110	Bhamashah member id	Bhamashah member id is invalid if it doesn't exist in the Bhamashah.
103	Entitlement ID	1. If Entitlement ID is null or 2. If Entitlement ID exists but its length is greater than 50
104	Due Date	If Date is null
105	Due Date	If Date format is not valid (DD/MM/YYYY)
106	Due Amount	If amount is null or amount is not valid
111	Request XML format	If request xml format is not valid
112	Any other error	If any fatal error occurs
122	Entitlement Member ID	If entitlement member id exists and length is greater than 50
129	Duplicate Transaction ID	If transaction id already exists for the same scheme.

## Service 4: Benefit Transfer Service

### 1. Objective:

Link the beneficiary “Transaction payment” details in Transaction mapper.

### 2. Staging URL:

<http://164.100.222.243/Service/Action/Action.wsdl>

### 3. Request Description

#### 3.1. Input parameters:

To share the Transaction payment information pass the two request parameter:

##### 3.1.1. Client-Id or X-IBM-Client-Id:

Provide the client id shared by DoIT&C when use the services on the live environment.

I.e. Client-Id = 3e0001f1-5aa5-4a99-abc7-581d69051z99

##### 3.1.2. Scheme Name:

Provide the scheme name for the “scheme” input parameter shared by the DoIT&C.

scheme=<scheme name>

##### 3.1.3. Beneficiary Information under request XML parameter:

Provide request xml for “reqXml” parameter.

reqXml=<request XML>

Request XML Template:

```
<root>
<Transaction>
<entitlementId>RJ-1212121</entitlementId>
<entitlementMemId></entitlementMemId>
<bhamashahId>WWEHASB</bhamashahId>
<bhamashahMemId>0</bhamashahMemId>
<transactionId>10012</transactionId>
<dueTransactionId>23232</dueTransactionId>
<aadharNo>123456789124</aadharNo>
<eid></eid>
<bankAccNo>56565656656</bankAccNo>
<ifsc>HDFC0200552</ifsc>
<micr></micr>
<paymentAmount>400</paymentAmount>
<paymentDate>30/04/2015</paymentDate>
<status></status>
</Transaction>
</root>
```

### 3.2 Transaction Payment information under requested XML:

Requested parameters are:

Request XML Fields	Description
Entitlement Id	Unique Id provided to beneficiary for a scheme. It should not be null
Entitlement Member Id	Pass beneficiary member id for the family Member (individual member) scheme.
Bhamashah Id	This should have Family Id or Acknowledge Id. Use Family Id if it generated else use acknowledge id. It should be same as received in Bhamashah family member info. It should not be null.
Bhamashah member id	Bhamashah member id. It should be same as received in Bhamashah family member info.
Aadhaar/EID Number	Aadhaar or EID number. These are option values.
Bank Account Number	Valid bank account number. It should not be null.

IFSC	Valid bank IFSC code. It should not be null.
MICR	MICR code. Its length should be 9 digits.
Due Transaction Id	Pass the same Transaction id which you shared for its Due payment under Benefit Due Service. It should not be null.
Transaction Id:	Unique transaction id for a Benefit Transfer Service. It should not be null.
Payment Date	Payment Date. It should not be null and in DD/MM/YYYY format.
Payment Amount	Payment Amount. It should not be null and should be a number.
Status	Payment Status remark. It may contain the payment transfer status i.e. "Success" or Failure.

## 4. Response Description

### 4.1. Response XML Template

```
<root>
    <requestId>schemename#1076</requestId>
    <cmsg></cmsg>
    <transaction>
        <transactionId>23232</transactionId>
        <isSaved>Y</isSaved>
        <msg></msg>
    </transaction>
</root>
```

### 4.2. Response XML Template Description:

1. Request Id: Unique request id generated by the Bhamashah service for the further correspondence. Department should store this information.
2. cmsg tag: If scheme name is not valid or request xml format is not valid (as per request template ) then request xml will not be processed further and appropriate error code will be send in cmsg tag.
3. transactionId: This is same transaction id on which request is made.
4. isSaved: Response xml contains each records success or failure status. If it successfully saved the isSavevalue pass "Y" and it fails "N".
5. msg: In case of failure error message code <msg/> contains the error code. In case of multiple error code will be separated by "," i.e. <msg>104,106</msg>

### 4.3. Error Message and Error condition:

Error Code	Field Name	Error Condition
101	Scheme	If Scheme name is null or not valid
110	Bhamashah ID	It should have Family Id (length=7) or Acknowledge Id (length=15). It is invalid if it doesn't exist in the Bhamashah.
110	Bhamashah member id	Bhamashah member id is invalid if it doesn't exist in the Bhamashah.
103	Entitlement ID	1. If Entitlement ID is null or 2. If Entitlement ID exists but its length is greater than 50
104	Due Date	If Date is null
105	Due Date	If Date format is not valid (DD/MM/YYYY)
106	Due Amount	If amount is null or amount is not valid
107	Aadhar and EID Number	Aadhar/ EID is optional. If Aadhar exists it should be 12 digit number or If EID exists it should be 28 character
108	IFSC code	IFSC code not null and should be 11 character
111	Request XML format	If request xml format is not valid
112	Any other error	If any fatal error occurs
113	Bank Account Number	If bank account number is not valid. Valid bank account number length should be >6 and <26
122	Entitlement Member ID	If entitlement member Id exists and length is greater than 50
126	Status	If Status exists and its length is greater than 50 characters.
127	MICR	If MICR length is not equal to 9
102	Due Transaction id	1. If due transaction id is null.or 2. If due transaction id is not null and length is greater than 30
128	Transaction id	1. If transaction id is null.or 2. If transaction id is not null and length is greater than 30
129	Duplicate Transaction ID	If transaction id already exists for the same scheme.



e-mitra

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## GLOSSARY OF TERMS

### Acronym

#### Acronym

AES	Advanced Encryption Standard
B2C	Business to Consumer
G2C	Government to Consumer
JSON	JavaScript Object Notation
Md5	Message-Digest algorithm 5
RISL	RajComp Info Service Limited
SSO	Single Sign On
UAT	User Acceptance Testing
URL	Uniform Resource Locator

## INTRODUCTION

e-Mitra is an ambitious e-governance initiative of Government of Rajasthan (GoR) which is being implemented in all 33 Districts of the state using Public-Private Partnership (PPP) model for convenience and transparency to citizens in availing various services of the Government and Private Sectors under a single roof at their door steps using an e-platform. The services are delivered via counters known as CSC (Common Service Center) kiosks in Rural Areas and e-Mitra kiosks in urban areas and also online via eMitra portal. Hence, these counters provide services related to various departments in an integrated and easily accessible manner to people residing in rural as well as urban areas without any need for running around in government offices. The project has been operational since 2005. Initially it was functioning through a Client Server based Application Software developed by Department of IT&C. In 2010, the old Client Server Application was migrated to Web-based on-line e-Mitra application across all the 33 districts. Recently, a new generic module has been added to e-Mitra portal which allows end to end application and delivery of "Digitally Signed Certificates" such as Bonafide, Caste, Income, Solvency etc. This service was launched by Hon. CM, Shri Ashok Gehlot on 12.05.2011.

## FETCHDETAILS\_SERVICES:

FetchDetails\_Services:

Introduction :

Billing Data Fetch Details:

REQUEST

Request Method = POST

Request Parameter Name = encData

Sample Decrypted Value = {'SRVID':'1214','searchKey':'9352423664','SSOID':'SSOTESTKIOSK'}

Sample Encrypted Value =

ELNJOXDH9zon/9qKclYzTLTLD3BHPSvI7tglugHzp7M8AkCLfGohln8L3h4nn1k+pPv93oX/FwCvQI+QYNILv  
PYhfXhI2ZmiG9nj9GZGcAU=

Encryption Type = AES

Encryption Key = E-m!tr@2016

### Parameter Details

#	Parameter Name	Description	Sample Value	Type
1	SSOID	SSO Id of Kiosk user	'SSOTESTKIOSK'	varchar
2	SRVID	Service id - this should be sent to eMitra for back to back transactions at eMitra	1214	varchar
25	SearchKey	SearchKey	9352423664	varchar

### Examples

Sample request format

```
<form name="form" method="post" action=" POSTING_URL">
<input type="hidden" name="encdata" value="encrypted data">
```

Sample Response:

Sample Decrypted Response =

```
"Modified = {
    ""FetchDetails"": {
        ""TransactionDetails"": {
```

```
    },
    "ServiceName": "Airtel Mobile",
    "officeID": "DDD1",
    "BillAmount": "941.00",
    "ConsumerName": "Chetan Kumar Yadav",
    "consumerKeysValues": "9352423664",
    "partPaymentAllow": "1",
    "partPaymentType": "Both",
    "lookUpId": "6163298"
},
"BillDateils": [
{
    "LableName": "Consumer Name",
    "LableValue": "Chetan Kumar Yadav"
},
{
    "LableName": "Account Number",
    "LableValue": "1116231291"
},
{
    "LableName": "Mobile Number",
    "LableValue": "9352423664"
},
{
    "LableName": "Amount Before Due Date",
    "LableValue": "931.00"
},
{
    "LableName": "Amount After Due Date",
    "LableValue": "941.00"
},
{
    "LableName": "Due Date",
    "LableValue": "NA"
},
{
    "LableName": "Bill Date",
    "LableValue": "NA"
},
{
    "LableName": "Bill Cycle",
    "LableValue": "NA"
},
{
    "LableName": "Bill Number",
    "LableValue": "NA"
}
]
}
```

## **Sample Encrypted Response =**

w2tZwKucTyOLM+cq+H1aRTUCQmP2FfowDEpHgs0Y/uvX8ffXHfZMPBZDxbYK4t5J0L857eNJnqOxC5f+yMA3wnDvUAAtzMYnjhRFY/PPAai3V1pegD6ptNwZI21nxewT/BYl7sfKgb2sAlyjimjNkzRmlUS/sSht2medbly38wepLzs9txn6B4yFPVDtvj7fxn2ClgNZ15EvxPie1fcI6KqaFQPmqMhZzTDgsavJOhag3TJM0hK52iowW9nLNjmzoa0adCATFdQlsYEDWG3BlYPkuHLXTKclPYtrhzHNKMCMGf1CRsQQ2eUqi4/pCCwgiBu7nRzSaJbz8zLlK+qcYNf2dmeIJnD3kToIYvkMjA1DCwoyKy9sc8rSfk8ntt/nhh8xrH6YqrQXI9Ar+WJFF1CFWyuOl8MhVGBC1SXgnp+BYwddzY0s5oCBlqzHs7saeCZZ6vxbgJvMESXeUCdPQ4BSLA4wk14spjl7q8Jo1ErRlPFlU+pfkCrBsspECujCFGfQ/iqfoVUZMZmk0duHx6lkCAhSdDFuwICoHE1ndaauYFeUFYlchRx6ZQAA2jdJ+ZWSt8xtSS/WSvOydt6ncqfgkCLIDhm3rOYWbIViz4UaRl0tlbcCGyOBSiubR71GC2B/J0GERIQsCR+1VujQdqowWP+l02RyhM6SCsojpEX5BGKB2wVnsyl8CU109VZClbu6UWySkljAS6w49dKT+XJR/z3qFpMWLxR3xDHReRzljtd1fvK5UNprfle5j6NCCcGD8EMgcwGDU3dMlGtzrJlruakbftmZblqroDy3ACYN2E1UOVeAdviONsFMBViylolgY8IkZUT8yPrAEBGK3Pnw1h8o0uUWNGB83rHfMNETBH+5XYO5riE4CTWEPTYQPLniT1wqP9QWkknC0HreAsdxglT4BQlx9hzgZHW7qPwl5Cloak2afgPWGU8L2Vk7ZUK7tF+AFLkcwtCW9KWsMySWCXAGAofmVXeh0M9tFGFHBRpxL4iEBLsWkqjVdUTwi7lt0SBINVgZ4G0Oq93rqBQ1Y6ik/MFgtqlVo7RzxF+qeWFVq0LxBsDxeCR8pxcK/TKsmdToc6OyL85h970INSG9stEeRysWpKRaMQbnakhNfkJAPqr6QjA5G6oO

## **Emitra-Aggregator-Linking:**

### **Introduction :**

Emitra Aggregator Details.

Production Url : <http://10.68.180.58/emitraApps/emitraAggregator>

Fields in the above url :

1.) MID : "SSOPORTAL" -Fixed

2.) encData :

```
{"data:[{"ServiceID":"'+pars.serviceId+'","ConsumerKey":"'+pars.consumerKey+'","ConsumerName":"'+pars.consumerName+'","BillAmount":"'+pars.billAmount+'","MerchantTransNo":"'+pars.MerchantTransNo+'","Event Type":"'+pars.EventType+'","Ssold":"'+pars.Ssold+'","Emitrald":"'+pars.Emitrald+'","EntityId":"'+pars.EntityId+'","EntityTypeld":"'+pars.EntityTypeld+'","SenderEntityId":"'+pars.SenderEntityId+'","ReceiverEntityId":"'+pars.ReceiverEntityId+'","Officeld":"'+pars.Officeld+'","ServiceName":"'+pars.ServiceName+'","LookUpId":"'+pars.LookUpId+'","MobileNumber":"'+pars.MobileNumber+'","EmailId":"'+pars.EmailId+'","MerchantCode":"'+pars.MerchantCode+'","deviceid":"'+pars.deviceid+'","flagLoggedIn":"'+pars.flagLoggedIn+'"}]
```

encData will be encrypted with the tripleDes Encryption. Key for the Triple des Encryption:

**EmitraNew@2016**

## REQUEST

Request Method = GET

Request Parameter Name = encData

### Parameter Details

#	Parameter Name	Description
1	pars.serviceld	From Fetch Detail Data - fetchdetails from emitra
2	From Fetch Detail Data / or By User - fetchdetails from emitra	From Fetch Detail Data / or By User - fetchdetails from emitra
3	pars.consumerName	From Fetch Detail Data - fetchdetails from emitra
4	pars.billAmount	By User -- Incase of edit the textbox value else billAmount from emitra
5	pars.MerchantTransNo	Unique transaction number. Generate some unique id. --- unique number
6	pars.EventType	"102" -- Fixed
7	pars.Ssold	"SSOTESTKIOSK" -- can handle blank too for stateportal
8	pars.Emitrald	"1000072531" --- Always blank
9	pars.EntityId	"184" -- Fixed
10	pars.EntityTypeld	"8" -- Fixed
11	pars.SenderEntityId	"" --- Always blank
12	pars.ReceiverEntityId	"" --- Always blank
13	pars.Officeld	From Fetch Detail Data
14	pars.ServiceName	From Fetch Detail Data / or pass any string
15	pars.LookUpId	From Fetch Detail Data
16	pars.MobileNumber	By User -- User input
17	pars.Emailld	By User -- User input
18	pars.MerchantCode	"SSOPORTAL"
19	pars.deviceld	"" -- Fixed
20	pars.flagLoggedIn	"true" --- true for sso/ false for sp
21	para.RUURL	return URL
22	para.sessionid	session id for transaction

---

## Example

Sample:

```
encData : (encrypted )
5FZqHt3nB6K1ScJrGZUUsF5DR33nZ9qgqco+ipTOt9LfWzxOTkarcbA/dk8p0RV5F8etu1WyOlzs
BQfZo/wEpY1S0ExtroYO7IrHLCbeOSnZ4Sql6UreBFcZdyBMwd9ppKpNeGvN4+82+70VTfHjMe
WR04fZXE4qDPq6WmTt2g1yPEsh60+B0jMkwWUKkXwoOILa90Lm7bgoaEnS+qeKFhAdpRotZa
ufCNccImLySPxGU1FHNjhFDfQznCiFrk89ns/eIsUWnJz7GAJ/PMtKvvqfMc0wn//UNg0zweesvgqy
yt05cbNJXW7BsJmZunTrxvW0cMfo7HOdazdD22EZ9UZGHk2aPdzZ6sKtSXmjBw0i0K0hn8oLma
gHXiflhqUFT7csW/MoEDJkjO1OZdld3VWhPsKZ7sVFLkYZWUUuNWcIEZSRSSqMjQpXWO/Nng
ZpiYaslu95Bl1At5B/eW7XYIGUQyhvtEgshLU2ns2hBnC2kuvF6x95uVluGveC/0I5RX1TKrlHzwDZ
2+UcWIhkWVvMgFIEHYXytfh2db/MlhkM7QcR7KxTxrEehUW6GwVkhOb0eBD+x2A9fZSvv/ExC7
4vi9JSDleCXlphoR0X6xtdCbLP1LnES1dYOEPwVqk3xXwaHriw+dN3cEsDmuR/Ng==
```

encData : (decrypt)

```
{data:[{'ServiceID':'1220','ConsumerKey':'7023003581-100032639411','ConsumerName':'SANJAY
SAINI','BillAmount':'1','MerchantTransNo':'SSOTESTKIOSKMobile1311941','EventType':'102','Sso
Id':'SSOTESTKIOSK','Emirald':'1000072531','EntityId':'184','EntityTypeld':'8','SenderEntityId':'','Re
ceiverEntityId':'','Officeld':'N','ServiceName':'MobileName','LookUpId':'4915041','MobileNumber':'8
909899089','EmailId':'ssotestkiosk@gmail.com','MerchantCode':'F1234','deviceld':'null','flagLogge
dIn':'true'}]}
```

3.) Output after Doing payment :

url : response url (provided by sso)

Read this url and will get the response parameter value. Decrypt this value with key :

"EmitraNew@2016". (With Triple Des Encryption ).

Success :

```
{data:[{'status':'200','msg':'SUCCESS','rcptNo':'16000009565','tokenNo':'0',
'bankRefNo':'5836973120','Amount':'100.00','sessionid':'sdfkjh1276','timespan':'2012-10-14'}]} --
differ sessionid
```

Failure :

```
{data:[{'status':'2','msg':'Transaction Failed. Reason: Transaction Not Allowed After Due Date For
BSNLLAND','rcptNo':'0','tokenNo':'0','Amount':'100.00','sessionid':'sdfkjh1276','timespan':'2012-
10-14'}]}
```

## Annexure A: URL of Sites

Web Service Name	Web Service URL
HackathonEmitraFetchBillin gData (Encrypted)	<a href="https://apitest.sewadwaar.rajasthan.gov.in/app/live/webServicesRepository/getFetchDetailsEncryptedBySso/WithEncryption?client_id=&lt;client_id&gt;">https://apitest.sewadwaar.rajasthan.gov.in/app/live/webServicesRepository/getFetchDetailsEncryptedBySso/WithEncryption?client_id=&lt;client_id&gt;</a>
Client Id	96f2ea05-8742-401d-aa42-ec269f8a71c0

## Annexure B: Encryption & Decryption Methods/Details

Encryption Method – AES encryption will be used with 128 bit key.  
Encryption Key – Will be shared with Parameters

Environment	Encryption Method	Key
UAT/Staging/ Production	AES encryption will be used with 128 bit key.	Will be shared with Parameters

## Annexure C: Various Parameter Values

Encryption Key	EmitraNew@2016
MID	
Service ID	

## Annexure D: ENCRYPTION/DECRYPTION

- Encryption is the process of converting plain text data into a form, called a cipher text (encrypted text), that cannot be easily understood by unauthorized people.
- Decryption is the process of converting encrypted data back into its original form, so it can be understood.

It is mandatory to implement encryption and exchange the information between Sites only in encrypted mode.

- e-MITRA follows Advanced Encryption Standard (AES) algorithm for Encryption and Decryption
- A symmetric key will be used for this Encryption and Decryption, which will be provided by e-MITRA.

## NOTE: - Please find Sample Java code for Encryption / Decryption

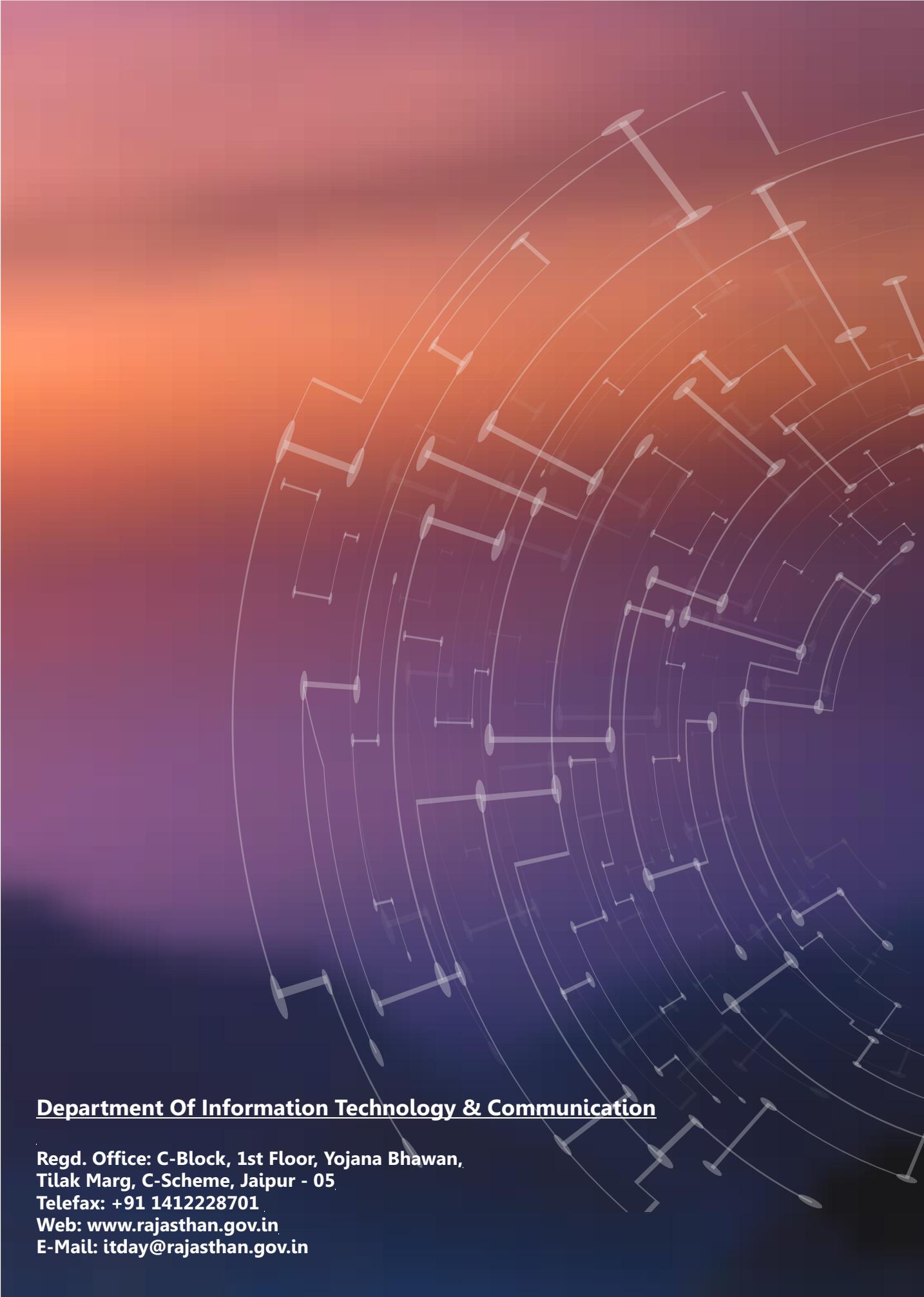
<https://drive.google.com/file/d/0BzEExiOjQnU2UUp4M1VIM2hIZW8/view?usp=sharing>

## Sample Encryption / Decryption code in Dot NET.

```
//Rextester.Program.Main is the entry point for your code. Don't change it.  
//Compiler version 4.0.30319.17929 for Microsoft (R) .NET Framework 4.5  
  
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Text.RegularExpressions;  
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Security.Cryptography;  
using System.Text;  
namespace Rextester  
{  
    public class Program  
    {  
        public static void Main(string[] args)  
        {  
            Console.WriteLine( Rextester.Program.Encrypt("Test","EmitraNew@2016"));  
            Console.WriteLine( Rextester.Program.Decrypt("pKXdPpYtjDbb9cpfthIWAA==","  
EmitraNew@2016"));  
        }  
        public static string Encrypt(string textToEncrypt, string EncryptionPassword)  
        {  
            RijndaelManaged rijndaelCipher = new RijndaelManaged();  
            rijndaelCipher.Mode = CipherMode.CBC;  
            rijndaelCipher.Padding = PaddingMode.PKCS7;  
            rijndaelCipher.KeySize = 256;  
            rijndaelCipher.BlockSize = 128;  
            byte[] pwdBytes = Encoding.UTF8.GetBytes(EncryptionPassword);  
            pwdBytes = SHA256.Create().ComputeHash(pwdBytes);  
            byte[] keyBytes = new byte[16];  
            int len = pwdBytes.Length;  
            if (len > keyBytes.Length)  
            {  
                len = keyBytes.Length;  
            }  
            Array.Copy(pwdBytes, keyBytes, len);  
            rijndaelCipher.Key = keyBytes;  
            rijndaelCipher.IV = keyBytes;  
            ICryptoTransform transform = rijndaelCipher.CreateEncryptor();  
            byte[] plainText = Encoding.UTF8.GetBytes(textToEncrypt);  
            return Convert.ToString(transform.TransformFinalBlock(plainText, 0, plainText.Length));  
        }  
    }  
}
```

```
public static string Decrypt(string textToDecrypt, string EncryptionPassword)
{
RijndaelManaged rijndaelCipher = new RijndaelManaged();
rijndaelCipher.Mode = CipherMode.CBC;
rijndaelCipher.Padding = PaddingMode.PKCS7;
rijndaelCipher.KeySize = 256;
rijndaelCipher.BlockSize = 128;

byte[] encryptedData = Convert.FromBase64String(textToDecrypt);
byte[] pwdBytes = Encoding.UTF8.GetBytes(EncryptionPassword);
pwdBytes = SHA256.Create().ComputeHash(pwdBytes);
byte[] keyBytes = new byte[16];
int len = pwdBytes.Length;
if (len > keyBytes.Length)
{
len = keyBytes.Length;
}
Array.Copy(pwdBytes, keyBytes, len);
rijndaelCipher.Key = keyBytes;
rijndaelCipher.IV = keyBytes;
byte[] plainText = rijndaelCipher.CreateDecryptor().TransformFinalBlock(encryptedData, 0,
encryptedData.Length);
return Encoding.UTF8.GetString(plainText);
}
}
}
public string CreateMD5(string input)
{
// Use input string to calculate MD5 hash
using (System.Security.Cryptography.MD5 md5 =
System.Security.Cryptography.MD5.Create())
{
byte[] inputBytes = System.Text.Encoding.ASCII.GetBytes(input);
byte[] hashBytes = md5.ComputeHash(inputBytes); // Convert the byte array to hexadecimal
string
StringBuilder sb = new StringBuilder();
for (int i = 0; i < hashBytes.Length; i++)
{
sb.Append(hashBytes[i].ToString("X2"));
}
return sb.ToString();
}
}
}
```



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