# Web API Instructions

By using this web API, you will be able to:
- Find a receipt in the database using the user id and the image url of the receipt
- Add a new receipt to the database
- Update a receipt that is already in the database
- Delete an existing receipt

## GET Request

| Name | Method | Description |
|---|---|---|
| /receipt | GET | Find an existing receipt |

Search Parameters

| Name | Data Type | Required/Optional | Description |
|---|---|---|---|
| user | string | required | user id |
| image_url | string | required | encoded url of the receipt image |

Sample Request
http://localhost:8080/Itemize/receipt?user=1
&image_url=http%3A%2F%2Fwww.samplerequest.com
(This sample request will access the receipt with user_id="1" and
image_url="http://www.samplerequest.com")

Response Value

| Name | Type | Definition |
|---|---|---|
| merchant name | String | Name of the store |
| merchant address | String | Address of the store (empty string if not exist) |
| expense category | String | category of the expense |
| purchase date | Date | Date of purchase (not the date when the entry was created) |
| subtotal | Float | Two digits after decimal |
| tips | Float | Two digits after decimal |
| discount | Float | Two digits after decimal |
| taxes | Float | Two digits after decimal |
| grand total | Float | Two digits after decimal |
| image url | String | url of the receipt image |

Sample Response
- If no receipt is found
null
- If the corresponding receipt is found
{
     "merchant name":"McDonald's",
     "merchant address":"18 E 42nd St, New York, NY 10017",
     "purchase date":"2017-01-15",
     "subtotal":3.5,
     "grand total":4,

```
        "taxes":0.5,
        "discount":0,
        "image url":"http://sampleresponse.com",
        "expense category":"food",
        "tips":0
}
```

## POST Request

| Name | Method | Description |
|------|--------|-------------|
| /receipt | POST | Add a new receipt |

Search Parameters

| Name | Data Type | Required/Optional | Description |
|------|-----------|-------------------|-------------|
| user | string | required | user id |
| image_url | string | required | encoded url of the receipt image |
| merchant_name | string | required | encoded string of the merchant name |
| merchant_address | string | optional | encoded string of the merchant address |
| category | string | required | expense category |
| subtotal | number | optional | |
| taxes | number | optional | |
| tips | number | optional | |
| discount | number | optional | |
| grand_total | number | required | |
| date | string | required | purchase date, has to be in the format of MMddyyyy |

Sample Request
http://localhost:8080/Itemize/receipt?user=1&merchant_name=
McDonald%27s&image_url=http%3A%2F%2Fwww.samplerequest.com&catego
ry=food&grand_total=4&date=01152017
(This will add a receipt of user 1, the image url of the receipt is
www.samplerequest.com, the merchant name of the receipt is McDonald's, the
expense category is food, the grand total is 4 dollars, and the purchase date is Jan
15, 2017)

Response Value

| Name | Type | Definition |
|------|------|------------|
| status | String | If post successfully, status will be okay; If missing required parameters, status will be "Invalid Parameter"; If user does not exist in the user table, status will be "User does not exist"; If due to database, posting was unsuccessful, return status will be "Unsucessful" |

Sample Response
- If successfully added the receipt
{

      "status":"OK",

}
- If not all required parameters are in the request
{

      "status":"Invalid Parameter"

}
- If the user does not exist in the database
{

      "status": "User Does Not Exist"

}
- If post unsuccessfully due to database reasons
{

      "status": "Unsuccessful"

}

**PUT Request**

| Name | Method | Description |
|------|--------|-------------|
| /receipt | PUT | Update an existing receipt |

Search Parameters

| Name | Data Type | Required/Optional | Description |
|------|-----------|-------------------|-------------|
| user | string | required | user id |
| image_url | string | required | encoded url of the receipt image |
| merchant_name | string | optional | encoded string of the merchant name |
| merchant_address | string | optional | encoded string of the merchant address |
| category | string | optional | expense category |
| subtotal | number | optional | |
| taxes | number | optional | |
| tips | number | optional | |
| discount | number | optional | |
| grand_total | number | optional | |
| date | string | optional | purchase date, has to be in the format of MMddyyyy |

Sample Request:
http://localhost:8080/Itemize/receipt?user=1&image_url=http%3A%2F%2Fw
ww.samplerequest.com&grand_total=6
(This sample request will update the corresponding receipt's grand total to 6)

Response Value

| Name | Type | Definition |
|---|---|---|
| status | String | If update successfully, status will be okay; If missing required parameters, status will be "Invalid Parameter"; If receipt does not exist in the user table, status will be "Receipt does not exist"; If due to database, update was unsuccessful, return status will be "Unsucessful" |

Sample Response
- If successfully updated the receipt
{
        "status":"OK",
}
- If not all required parameters are in the request
{
        "status":"Invalid Parameter"
}
- If receipt does not exist in the database
{
        "status": "Receipt Does Not Exist"
}
- If update unsuccessfully due to database reasons
{
        "status": "Unsuccessful"
}

**DELETE Request**

| Name | Method | Description |
|---|---|---|
| /receipt | DELETE | Delete an existing receipt |

Search Parameters

| Name | Data Type | Required/Optional | Description |
|---|---|---|---|
| user | string | required | user id |
| image_url | string | required | encoded url of the receipt image |

Sample Request:
http://localhost:8080/Itemize/receipt?user=1&image_url=http%3A%2F%2Fw
ww.samplerequest.com
(This will delete the receipt of user 1 and the image url of the receipt is
http://www.samplerequest.com)

Response Value

| Name | Type | Definition |
|---|---|---|
| status | String | If successfully delete, status will be okay; If missing required parameters, status will be "Invalid Parameter"; If receipt does not exist, status will be "Receipt does not exist"; If due to database, deletion was unsuccessful, return status will be "Unsucessful" |

Sample Response
- If successfully delete the receipt
{
        "status":"OK",
}
- If not all required parameters are in the request
{
        "status":"Invalid Parameter"
}
- If receipt does not exist in the database
{
        "status": "Receipt Does Not Exist"
}

- If delete unsuccessfully due to database reasons
{
        "status": "Unsuccessful"
}