Design: Service Layers

I, II. Service Endpoints and Purpose Through Personas:

1. ec2-3-89-109-160.compute-1.amazonaws.com

This is the public domain for EC2 created using AWS, which is the main address where the webpages will reside.

Purpose: As a user, the webpages will be viewed through this web URL address. All webpages and trending and updates will be in this URL.

2. ec2-3-89-109-160.compute-1.amazonaws.com/SamplePage.php

This is a sample web page in relation to the above. Once the web application is built, the webpages will all be attached to the main public domain like the sample above.

Purpose: As a user, I can see progress of current website through this URL address.

3. masscashdbinstance.cacydtzoxtsh.us-east-1.rds.amazonaws.com Port:3306

This is the database instance address, (RDS Mysql under AWS) for storing data from vendor website.
Details: subnet-01ea1c4aa34477da1
Route Table ID* rtb-01b16da6956ba4a0b

10.0.0.0/16
local
0.0.0.0/0
eni-0948efeff471669ad

Purpose: As a user, this will not be visible to me. However, this will be the origin of the server/ database engine where data is saved for populating webpages.

5.
masslottery-db-securitygroup (sg-0bfbbdde15db17f3b) Security Group - Inbound sg-0651109b265f21b05

Inbound security group allowing traffic on specific ports.

6. masslottery-db-securitygroup (sg-0bfbbdde15db17f3b) CIDR/IP - Outbound 0.0.0.0/0

Outbound security group.

7. PHP and Javascript scripts are saved under var/www/html.

Purpose: As a user, scripts are designed to only operate in the background of the websie. However, scripts will help me interact with the data through events.

8. Vendor Website For Web Parser: https://www.masslottery.com/games/lottery/mass-cash.html

Purpose: As a user, the above website is accessible to all public. They show the origin data behind the website, and allows me to understand that graphs make sense.

III. Example Requests and Responses:

Parsing Example and Catching Errors-

```
url = "http://www.masslottery.com/data/json/search/lotterygames/12/"+drawdate+".json"
        print(url)

        req = Request(url) #Make a request to vendor URL
        try:
           response = urlopen(req)
        except HTTPError as e:
        # HTTP status code that means something has gone wrong with requests or authentication to the URL
        # The numeric code from requests or authentication will be found in the dictionary of codes as found in http.server.BaseHTTPRequestHandler.responses.
           print('Error code: ', e.code)
        except URLError as e:
        # Exceptions or customized reasons to the error codes
           print('Reason: ', e.reason)
        else:
           data = json.loads(response.read())
```

Database DB Connection and Error-

```
if (mysql connect_errno()) {

printf(“Failed Connection: %s\n”,mysql_connect_error());

exit();

}
```

IV: Diagram Server Process-

https://www.masslottery.com/games/lottery/mass-cash.html

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ec2-3-89-109-160.compute-1.amazonaws.com