**Task 3:**

I have gone through the legacy code and found below problems. I have provided solution as well for those problems and modified the code accordingly. Please find the problems and corrected code below,

* **Problem 1:**
  + Syntax error in ternary condition.
* **Corrected Code:**

$masterEmail = (isset($masterEmail) && $masterEmail) ? $masterEmail : ((array\_key\_exists('masterEmail', $\_REQUEST) && $\_REQUEST["masterEmail"]) ? $\_REQUEST['masterEmail'] : 'unknown');

* **Problem 2:**
  + Undefined array key "email” so have to check array of key is exist or not.
* **Corrected Code:**

if (isset($\_REQUEST['email'])) {

$masterEmail = $\_REQUEST['email'];

    }

* **Problem 3:**
  + Before DB connection should have to handle error with exception handling.
* **Corrected Code:**

try{

$con = mysqli\_connect('localhost', 'root', 'sldjfpoweifns','my\_database');

if (mysqli\_connect\_errno()) {

   echo "Failed to connect to MySQL: " . mysqli\_connect\_error();

   exit();

 }else{

**$result = mysqli\_query($con, "SELECT \* FROM user WHERE email='" .** $masterEmail . "'");

  $row = mysqli\_fetch\_row($result);

}

} catch{echo ‘Something went wrong with DB connection.’;}

To get bonus point😊,I have modified entire legacy code and written in object-oriented way. Please find it below,

<?php

define('DB\_HOST','localhost');

define('DB\_USER','root');

define('DB\_PASSWORD','sldjfpoweifns');

define('DB\_DATABASE','my\_database');

class DatabaseConnection

{

    /\* DB connection in constructor \*/

    public function \_\_construct(){

        $conn = mysqli\_connect(DB\_HOST,DB\_USER,DB\_PASSWORD,DB\_DATABASE);

        if($conn->connect\_error)

        {

            die ("<h1>Database Connection Failed</h1>");

        }

        //echo "Database Connected Successfully";

        return $this->conn = $conn;

    }

}

if (isset($\_REQUEST['email'])) {

    $masterEmail = 'abc@gmail.com';

}

$masterEmail = (isset($masterEmail) && $masterEmail) ? $masterEmail : ((array\_key\_exists('masterEmail', $\_REQUEST) && $\_REQUEST["masterEmail"]) ? $\_REQUEST['masterEmail'] : 'unknown');

/\*\*

 \* Create object for database connection

 \*/

$db = new DatabaseConnection;

if ($result = mysqli\_query($db->conn, "SELECT \* FROM tbl\_user Where email ".$masterEmail."")) {

    $row = mysqli\_fetch\_row($result);

    print\_r($row);

    return $row;

}

?>