By: Mohammad Khan

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Screenshots

MySQL Workbench

MySQL workbench screenshot shows the table used and extracts and has the query to show all the records stored in the table.

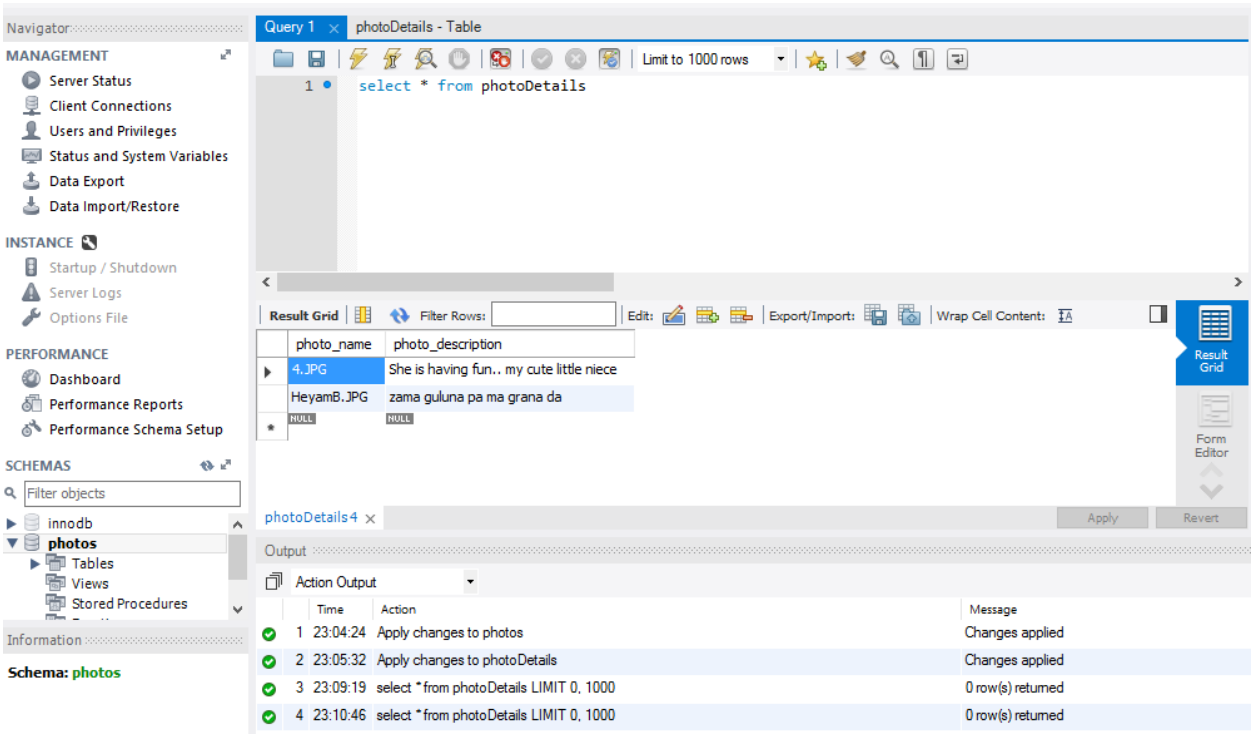

Figure 1: MySQL Workbench

Index Page

Following is the screenshot of index page to show the form where I ask the user for image and image description.

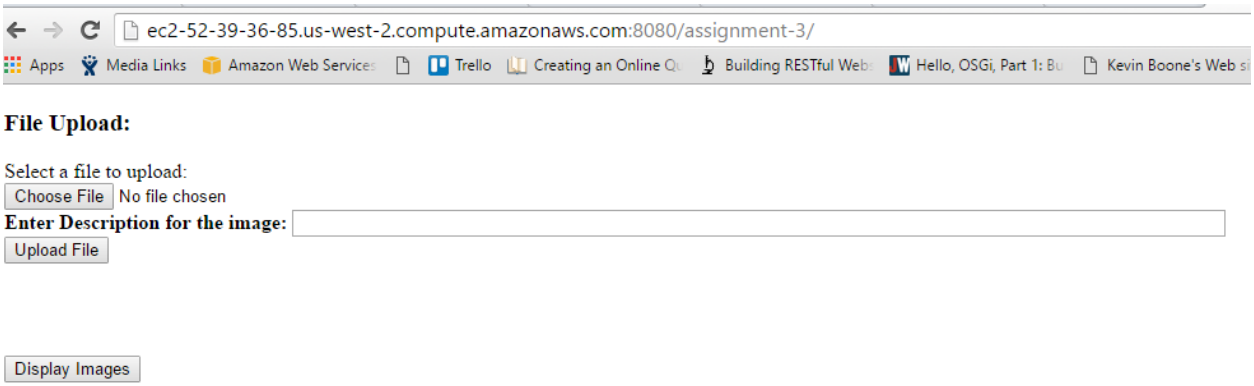

Figure 2: Index page

Display Page

Following is the page to show the saved images with their corresponding descriptions.

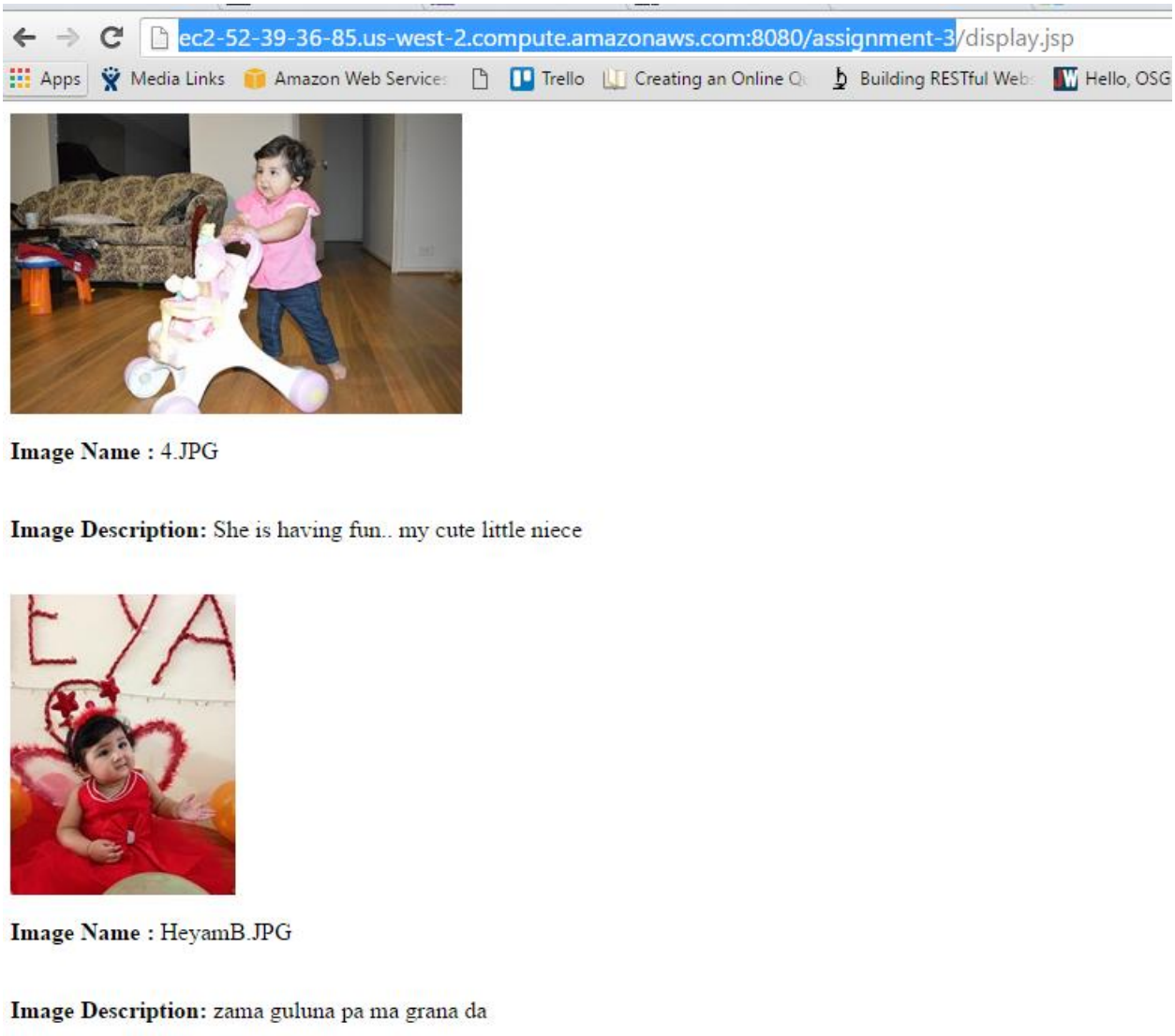

Figure 3: Display Page

Code

Index.html

```
<!DOCTYPE html>
<html>
<head>
<title>File Uploading Form</title>
</head>
<body>
    <h3>File Upload:</h3>
    Select a file to upload:
    <br />
    <form action="UploadFile.jsp" method="post" enctype="multipart/form-data">
        <input type="file" name="file" /> <br /> <label for="description">
<b>Enter Description for the image:</b>
        </label>  <input  id="description"  size="100"  name="description"
type="text"></input> <br /> <input type="submit" value="Upload File" />

    </form>
    <br></br>
    <br></br>
    <form action="display.jsp" method="post">
        <input type="submit" value="Display Images" />
    </form>
</body>
</html>
```

UploadFile.jsp

```
<!DOCTYPE  html  PUBLIC  "-//W3C//DTD  HTML  4.01  Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<%@  page  language="java"  contentType="text/html;  charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<%@ page import="java.io.*,java.util.*, javax.servlet.*"%>
<%@ page import="javax.servlet.http.*"%>
<%@ page import="org.apache.commons.fileupload.*"%>
<%@ page import="org.apache.commons.fileupload.disk.*"%>
<%@ page import="org.apache.commons.fileupload.servlet.*"%>
<%@ page import="org.apache.commons.io.output.*"%>
<%@ page import="com.amazonaws.auth.AWSCredentials"%>
<%@ page import="com.amazonaws.auth.BasicAWSCredentials"%>
<%@ page import="com.amazonaws.services.s3.AmazonS3"%>
<%@ page import="com.amazonaws.services.s3.AmazonS3Client"%>
<%@ page import="com.amazonaws.services.s3.model.ObjectMetadata"%>
<%@ page import="com.amazonaws.services.s3.model.PutObjectRequest"%>
<%@ page import="java.sql.Connection"%>
```

```
<%@ page import="java.sql.DriverManager"%>
<%@ page import="java.sql.SQLException"%>
<%@ page import="java.sql.Statement"%>
<%@ page import="java.sql.ResultSet"%>
<%@ page import="java.sql.PreparedStatement"%>


<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Insert title here</title>
</head>
<body>

    <%
      String contentType = request.getContentType();
      String imageName = "";
      String desc = "";

      if ((contentType.indexOf("multipart/form-data") >= 0)) {

            DiskFileItemFactory factory = new DiskFileItemFactory();
            ServletFileUpload uploadHandler = new ServletFileUpload(factory);
            uploadHandler.setSizeMax(1024 * 1024 * 1); //1MB

            List<FileItem> fileItems = uploadHandler.parseRequest(request);
            Iterator<FileItem> iterator = fileItems.iterator();

            try {
                  BasicAWSCredentials       awsCredentials       =       new
BasicAWSCredentials("*****************",
                              "*****************************");
                  AmazonS3 s3client = new AmazonS3Client(awsCredentials);

                  while (iterator.hasNext()) {
                        FileItem fileItem = (FileItem) iterator.next();

                        if (fileItem.isFormField()) {

                              String                    name                    =
fileItem.getFieldName();//description
                              desc    =    fileItem.getString();    //value    of
description

                        }
                        if (!fileItem.isFormField()) {
                              String fileName = fileItem.getName();
                              imageName = fileName;
                              boolean isInMemory = fileItem.isInMemory();
                              ObjectMetadata     objectMetadata     =     new
ObjectMetadata();

      objectMetadata.setContentLength(fileItem.getSize());
                              s3client.putObject(new
PutObjectRequest("mkhan9", fileName, fileItem.getInputStream(),
                                          objectMetadata));
```

```
                              out.println("<h1>"  +  fileName  +  "  uploaded
</h1>");

                        }
                  }
            } catch (Exception e) {
                  out.println(e);
            }
      }

      Statement stmt = null;
      Connection connection = null;
      PreparedStatement prep = null;
      ResultSet rs;

      try {

            Class.forName("com.mysql.jdbc.Driver");
            //Creating a connection to the required database

            connection = DriverManager.getConnection(
                        "jdbc:mysql://mkhan9.cxjfdlvd1ypl.us-west-
2.rds.amazonaws.com/photos", "mkhan9", "bluebird9");
            stmt = connection.createStatement();
            prep = connection
                        .prepareStatement("insert                          into
photos.photoDetails(photo_name,photo_description) values(?,?)");
            prep.setString(1, imageName.trim());
            imageName = "";
            prep.setString(2, desc.trim());
            prep.executeUpdate();
            connection.close();

      } catch (SQLException ex) {
            // handle any errors
            out.println("SQLException: " + ex.getMessage());
            out.println("SQLState: " + ex.getSQLState());
            out.println("VendorError: " + ex.getErrorCode());
      }
      //After the entire execution this block will execute and the connection
with database gets closed

      finally {

            try {
                  connection.close();
            } catch (Exception e) {
                  // TODO Auto-generated catch block
                  e.printStackTrace();
            }

      }
    %>

    <h3>
        <a href="index.html"> Back to home page</a>
    </h3>
```

```
</body>
</html>
```

Display.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>
<%@ page import="com.amazonaws.auth.AWSCredentials"%>
<%@ page import="com.amazonaws.auth.BasicAWSCredentials"%>
<%@ page import="com.amazonaws.util.StringUtils"%>
<%@ page import="com.amazonaws.services.s3.AmazonS3"%>
<%@ page import="com.amazonaws.services.s3.AmazonS3Client"%>
<%@ page import="com.amazonaws.services.s3.model.ObjectListing"%>
<%@ page import="com.amazonaws.services.s3.model.S3ObjectSummary"%>
<%@ page import="java.sql.Connection"%>
<%@ page import="java.sql.DriverManager"%>
<%@ page import="java.sql.SQLException"%>
<%@ page import="java.sql.Statement"%>
<%@ page import="java.sql.ResultSet"%>
<%@ page import="java.sql.PreparedStatement"%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Insert title here</title>
</head>
<body>

    <%
      String imageName = "";
      BasicAWSCredentials awsCredentials = new
BasicAWSCredentials("******************",
                  "************************************");
      AmazonS3 s3client = new AmazonS3Client(awsCredentials);
      ObjectListing objects = s3client.listObjects("mkhan9");
      do {
            for (S3ObjectSummary objectSummary : objects.getObjectSummaries())
{
                  imageName = objectSummary.getKey().trim();
                  out.println("<img src=https://s3-ap-southeast-
2.amazonaws.com/mkhan9/" + objectSummary.getKey()
                              + " /> <p> <b>Image Name :</b> " + imageName +
"<br />");

                  Statement stmt = null;
                  Connection connection = null;
                  PreparedStatement prep = null;

                  try {

                        Class.forName("com.mysql.jdbc.Driver");
                        //Creating a connection to the required database
```

```
                        connection = DriverManager.getConnection(
                                    "jdbc:mysql://mkhan9.cxjfdlvd1ypl.us-
west-2.rds.amazonaws.com/photos", "mkhan9",
                                    "bluebird9");
                        stmt = connection.createStatement();
                        String  sqlQuery  =  "select  photo_description  from
photos.photoDetails where photo_name = ?";
                        prep = connection.prepareStatement(sqlQuery);
                        prep.setString(1, imageName.trim());
                        ResultSet rs = prep.executeQuery();
                        while (rs.next()) {
                              String                imgDes                =
rs.getString("photo_description");
                              out.println("<br/><p><b>Image Description: </b>"
+ imgDes + "</p><br />");
                        }
                        rs.close();
                        imageName = "";
                        connection.close();

                  } catch (SQLException ex) {
                        // handle any errors
                        out.println("SQLException: " + ex.getMessage());
                        out.println("SQLState: " + ex.getSQLState());
                        out.println("VendorError: " + ex.getErrorCode());
                  }
                  //After the entire execution this block will execute and the
connection with database gets closed

                  finally {

                        try {
                              connection.close();
                        } catch (Exception e) {
                              // TODO Auto-generated catch block
                              e.printStackTrace();
                        }

                  }
            }
            objects = s3client.listNextBatchOfObjects(objects);
      } while (objects.isTruncated());
    %>


    <h3>
        <a href="index.html"> Back to home page</a>
    </h3>


</body>
</html>
```