Test Project

IT Software Solutions for Business

WorldSkills 2021 national competition HUNGARY

1. round

Submitted by:

Skills IT

Contents

Introduction to Test Project

You are hired for Skills IT Management Ltd. to implement a desktop application for their next building project called Shanghai Park. They are a company that build apartment houses in Budapest and Wien. Your task is to implement the desktop application by following functional requirements below.

The company has hired a designer to design the prototype of the project website. Your application should also follow the style guide and the main design elements (logo, colors etc.) of the website.

Description of Tasks

Misc Style guide and visual apperance

Color

The design use the following basic color palette:

- Shanghai Green: #5dd782
- Shanghai Green Dark: #49b56a
- Shanghai Green Light: #67ee90
- Shanghai Gray: #333333
- Shanghai Gray Light: #eeeeee
- Shanghai White: #ffffff

They are used throughout the web design.

Visual Apperance

The provided website design shows how the elements fluidly layout on mobile and large screen. Please find the design files in the media files. You can find the full resolution in `Shanghai_Park_Design_Desktop.png` and `Shanghai_Park_Design_Mobile.png` in the provided media files.

Use the given wireframes for your application. It is your responsibility to create the design based on on the website design and the wireframes.You don't have to stick to the wireframe in a pixel precise way, please try your best to create layouts that are user friendly.

Font Family

Font family is `arial-narrow`. Font family of the logos is `estimo-bold`. You can find them in the media files.

Title Bar

In the title bar of the main window the following text should appear: "Skills IT Managament (YY)" where YY is your competition ID.

Data source, database

Your application should use a MySQL database which stores data of the buildings, flats, and customers (actual buyers and people who are interested in buying a flat). The name of the database should be `skills_it_yy`, where `yy` is your competiton ID. Use the following credentials with full right to the database:

username: `skill09-yy`
password: `Shanghai2021`

Source data of the buildings and flats is provided in a json file (`skills-it-buildings.json`)

You have to design your own database based on this file and the requirements below. It is not mandatory to follow the structure and the naming convention of the json file, but your database should be well structured and normalized. Please provide your final database diagram in a file called `skills-it-database-yy.png` in the `database` folder of your repo.

Expected funcionality

1) Buildings Screen
   a) Buildings
      i) Display the buildings in a list.
      ii) The user can add a new building.
      iii) The user can edit existing buildings.
      iv) Statistics: number of flats
         (1) all
         (2) sold
         (3) for sale
   b) Flats
      i) Display the flats in a list for the selected building.
      ii) This list is sortable (by number of rooms, area, terrace size, price).
      iii) The user can add a new flat.
      iv) The user can edit existing flats.
      v) If user moves the mouse over net area field, calculation of gross area should appear on a tooltip. (gross area = net area + terrace area / 2)

2) Database
   a) The user can import building and flats from a JSON which has the same structure than `skills-it-buildings.json`. All existing building/flat data in the database should be deleted before importing.
   b) The user can export existing building and flat info into a JSON file which has the same structure than `skills-it-buildings.json`

3) Customers Screen
   a) You do not have to implement the Customers Screen functionalty. This part of the program will be developed in a further project phase.

Assessment

In your GitHub repo you have to share

1. The source code of your project

2. Installation package for Windows 10

3. MySQL dump of your database

Testing environment:

We will evaluate your work in a PC with a

- fresh installation of Windows 10 Professional 64 bit

- installation of your project with the default settings

- XAMPP 7.3.14 package with running MySQL service on the default 3306 port

- database cretated by the following MySQL statemanets:

```
CREATE DATABASE skills_it_yy;
CREATE USER 'skill09-yy'@'localhost' IDENTIFIED BY 'Shanghai2021';
FLUSH PRIVILEGES;
GRANT ALL PRIVILEGES ON skills_it_yy.*  TO 'skill09-yy'@'localhost';
USE skills_it_yy;
SOURCE skills-it-database-yy.sql;
```

where yy is your competition ID, `skills-it-database-yy.sql` is your SQL dump from your repo's `database` folder.