

Assignment

The goal of this assignment is to have you work on a small project using the programming language of your choice, covering the following aspects:

1. **User Interface:** Develop an interface where users can input data.
2. **Data Storage:** Save the entered data into a database of your choosing.
3. **Data Analysis:** Utilise the database to compute or derive meaningful values.

The application you will build is intended for gathering survey data on people's lifestyle preferences. The app should be a desktop, web, or mobile application that can be placed in a public area for individuals to fill out a survey. The objective is to gather as many responses as possible for data analysis purposes. Please feel free to contact us for clarification on these requirements.

Duration

You have a 1-week period from the date of receiving this assignment to complete it.

Deliverables

Once you've completed the assignment, you will be expected to:

1. Submit a short video demonstrating your application in action.
2. Provide access to the completed project by sharing a git repository link (e.g., GitHub, BitBucket) with us.
3. Send the code repository link and the video to the following email: internship@tshimologong.joburg.

Rules

1. Complete the work independently.
2. Utilise as many online resources as needed.

3. As this app will not go into production, you can disregard concerns regarding the POPI Act or any other data protection legislation.
4. Don't hesitate to contact us for any clarifications on these requirements.

Specifications

User Interface

For the user interface, there are 2 screens that need to be created.

Screen 1: Fill Out Survey

When the application starts up the user will be presented with the survey screen and navigation menu.

_ Surveys

FILL OUT SURVEYVIEW SURVEY RESULTS

Personal Details :

Full Names

Email

Date of Birth

Contact Number

What is your favorite food? ☐ Pizza ☐ Pasta ☐ Pap and Wors ☐ Other

Please rate your level of agreement on a scale from 1 to 5, with 1 being "strongly agree" and 5 being "strongly disagree."

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I like to watch movies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to listen to radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to eat out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to watch TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SUBMIT

The personal details section features text boxes for input, while the favourite food question utilises checkboxes to allow users to select multiple options. The final question about rating employs radio buttons, restricting the user to one choice. The chosen response is translated into a number from 1 to 5. When the user clicks submit, the entered data should be saved to a database of your choosing.

Screen 2: View Survey Result

When the "View Survey Results" menu link is clicked, the screen should display the survey results as below if there is data in the database; otherwise, it should show a message stating, "No Surveys Available."

[_ Surveys](#)

[FILL OUT SURVEY](#)
[VIEW SURVEY RESULTS](#)

Survey Results

Total number of surveys :	#surveys
Average Age :	#average age
Oldest person who participated in survey :	#max age
Youngest person who participated in survey :	#min age
Percentage of people who like Pizza :	# % Pizza
Percentage of people who like Pasta :	# % Pasta
Percentage of people who like Pap and Wors :	# % Pap and Wors
People who like to watch movies :	#average of rating
People who like to listen to radio :	#average of rating
People who like to eat out :	#average of rating
People who like to watch TV :	#average of rating

The expected calculations are as follows:-

- The Total number of surveys completed. This is just a count of the total number of rows in the database.

- Average age of the people that participated in the survey
- Oldest person that participated in the survey
- Youngest person that participated in the survey.
- Percentage of people who like Pizza is calculated by the number of people that like Pizza divided by the total number of surveys. Multiply by 100 to get the percentage. Present the result rounded off to 1 decimal place.
- People like to eat out is calculated by working out the average of the rating. Present the result rounded off to 1 decimal place.

Design and Validation

- Validate the fields. Check that the user has not left any of the text fields empty before they submit.
- The user may NOT enter a value for Age that is less than 5 and should not be more than 120.
- Ensure that the user has actually selected a rating for each of the four rating questions. They cannot submit a survey without selecting a rating.
- Design the screens to look like the ones shown above.
- Where the user is expected to enter the date, use a date picker.