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KEDAH BRANCH
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COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS

DIPLOMA IN LIBRARY INFORMATICS (IM 144)

IML 208: PROGRAMMING FOR LIBRARIES

INDIVIDUAL PROJECT: 5K RUN REGISTRATION

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1.0 INTRODUCTION

This project is focused on running event registration called “5K Run Registration Form”. The main objective of creating this program is to make it easy for someone who likes to engage in running activities. This running event will attract people from various age levels to join because of the discount that has been providing for the fee registration.

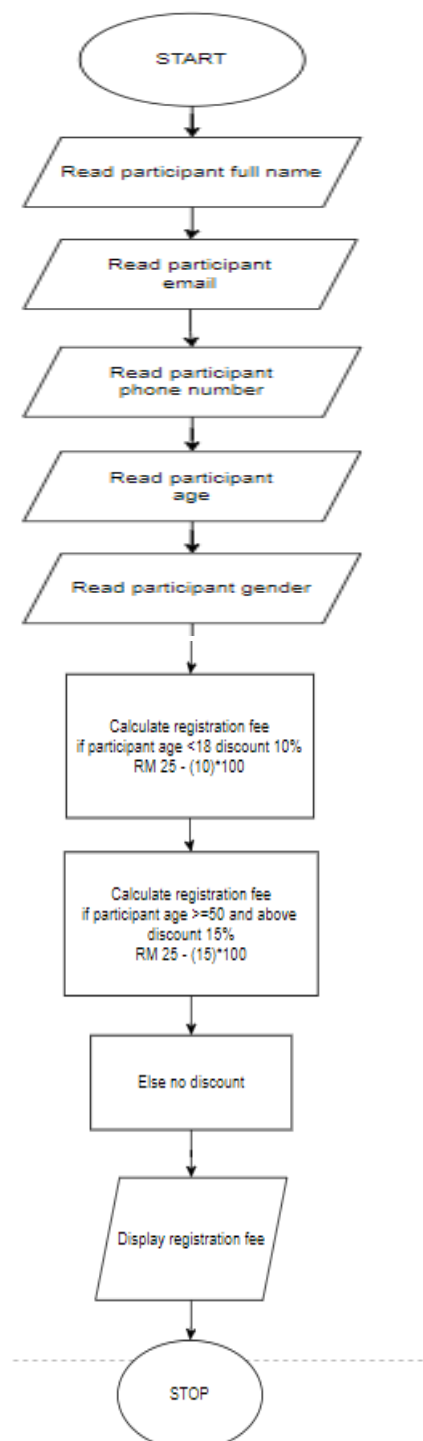
The fee registration for the 5K Run is only RM 25 but participants aged under 18 will get a 10% discount and a 15% discount for participants aged 50 and above.

To make this programme I use 6 attributes to save all the information about participants and also the required registration fee. The example of attributes that I used is participant full name, email, phone number, age, gender and registration fee.

The calculation of fee registration in this registration form was based on participant age. The fee registration for the 5K Run is only RM 25 but participants aged under 18 will get a 10% discount and a 15% discount for participants aged 50 and above. This registration form is open for participant age 12 until 70.

2.0 FLOWCHART

This flowchart shows the process of registration of the 5K Run Registration event. The calculation include in the registration process is a 10% discount on participants age under 18 and a 15% discount on participants aged 50 and above.



3.0 SNAPSHOT OF PROGRAMME CODE

```
1 #firstly, import tkinter as tk,
2 #and then import tkinter as ttk to use the comobox for gender
3 #and lastly import mysql.connector to make sure it will connect to database
4 import tkinter as tk
5 from tkinter import ttk
6 import mysql.connector
7 # Connect to your MySQL database
8 mydb = mysql.connector.connect(
9     |     host="localhost",
10     |     user="root",
11     |     password="",
12     |     database="5k_run_registration_form"
13     | )
14
15 # Create a cursor object to execute SQL queries
16 mycursor = mydb.cursor()
17
```

Figure 1

```
18
19 def collect_data():
20     participant_full_name = participant_full_name_entry.get()
21     print("Full Name: ", participant_full_name)
22     participant_email = participant_email_entry.get()
23     print("Email: ", participant_email)
24     participant_phone_no = int (participant_phone_no_entry.get())
25     print ("Phone Number: ", participant_phone_no )
26     participant_age = int(participant_age_spinbox.get())
27     print("Age: ", participant_age)
28     participant_gender = participant_gender_combobox.get()
29     print("Gender:", participant_gender)
30     registration_fee = 25 #registration fee
31     print ("Your registration fee is RM", registration_fee)
32
33
34 # Function to calculate fee based on age
35 def calculate_fee():
36     registration_fee = 25 # Default registration fee
37     if participant_age < 18:
38         | registration_fee = 25 - (0.1 * 25) # 10% discount for participant age under 18
39     elif participant_age >= 50:
40         | registration_fee = 25 - (0.15 * 25) # 15% discount for participant age 50 and above
41     return registration_fee
42
43 fee_value = calculate_fee()
44
```

Figure 2

```

45 # Display the registration fee in the label
46 registration_fee_label.config(text=f'Your registration fee is RM {fee_value:.2f}')
47
48 # Insert data into the database
49 sql = "INSERT INTO SK_run (participant_full_name, participant_email, participant_phone_no, participant_age, participant_gender, registration_fee) VALUES (%s, %s, %s, %s, %s, %s)"
50 values = (participant_full_name, participant_email, participant_phone_no, participant_age, participant_gender, registration_fee)
51
52 mycursor.execute(sql, values)
53
54 # Commit the changes to the database
55 mydb.commit()
56
57 # Close the database connection
58 mydb.close()
59
60 # Create GUI
61 root = tk.Tk()
62 root.configure(background="light blue")
63 root.title("SK Run Registration Form")
64 root.geometry('400x510')
65 # To center the root on the screen
66 screen_width = root.winfo_screenwidth()
67 screen_height = root.winfo_screenheight()
68
69 x_coordinate = (screen_width - 500) // 0.5
70 y_coordinate = (screen_height - 540) // 0.5
71

```

Figure 3

```

72 # the big title for the form page
73 label = tk.Label(root, text='SK RUN REGISTRATION', font=("Baskerville Old Face", 14, "bold"), bg="light blue")
74 label.grid(row=0, column=0, padx=10, pady=10)
75
76 frame = tk.Frame(root, bg="light blue")
77 frame.grid(row=1, column=0)
78
79 # Participant Information Frame
80 participant_info_frame = tk.LabelFrame(frame, text="Participant Information", font=("Times New Roman", 11), bg="gray", width=300)
81 participant_info_frame.grid(row=0, column=0, padx=10, pady=20, rowspan=3, colspan=7, sticky="nsew")
82
83 participant_full_name = tk.Label(participant_info_frame, text="Full Name", font=("Times New Roman", 11), bg="gray")
84 participant_full_name.grid(row=1, column=0, padx=(0,5))
85 participant_full_name_entry = tk.Entry(participant_info_frame, width=27)
86 participant_full_name_entry.grid(row=1, column=5)
87
88 participant_email = tk.Label(participant_info_frame, text="Email", font=("Times New Roman", 11), bg="gray")
89 participant_email.grid(row=2, column=0, padx=(0,5))
90 participant_email_entry = tk.Entry(participant_info_frame, width=27)
91 participant_email_entry.insert(0, "@gmail.com") # this value will show up at the email entry box
92 participant_email_entry.grid(row=2, column=5)
93
94 participant_phone_no = tk.Label(participant_info_frame, text="Number Phone ", font=("Times New Roman", 11), bg="gray")
95 participant_phone_no.grid(row=3, column=0, padx=(0,5))
96 participant_phone_no_entry = tk.Entry(participant_info_frame, width=27)
97 participant_phone_no_entry.grid(row=3, column=5)
98
99 participant_age = tk.Label(participant_info_frame, text="Age", font=("Times New Roman", 11), bg="gray")
100 participant_age.grid(row=4, column=0, padx=(0,5))
101 participant_age_spinbox = tk.Spinbox(participant_info_frame, width=25, from_=12, to=70) #open for 12 years old until 70 years old
102 participant_age_spinbox.grid(row=4, column=5)

```

Figure 4

```

104 participant_gender = tk.Label(participant_info_frame, text="Gender", font=("Times New Roman", 11), bg="gray")
105 participant_gender.grid(row=5, column=0, padx=(0,5))
106 participant_gender_combobox = ttk.Combobox(participant_info_frame, width=25, values=["Male", "Female"])
107 participant_gender_combobox.grid(row=5, column=5)
108
109 for widget in participant_info_frame.winfo_children():
110     widget.grid_configure(padx=10, pady=6)
111
112
113 # Registration Fee and Discount Frame
114 registration_fee_and_discount_frame = tk.LabelFrame(frame, text="Registration Fee and Discount", font=("Times New Roman", 11), bg="gray")
115 registration_fee_and_discount_frame.grid(row=5, column=0, padx=20, pady=10, rowspan=3, sticky="nsew")
116
117 registration_fee = tk.StringVar()
118 registration_fee_info = (
119     "The registration fee is only RM25\n"
120     "Participant age under 18 will get 10% discount\n"
121     "Participant age 50 and above will get 15% discount\n"
122 )
123 label = tk.Label(registration_fee_and_discount_frame, textvariable=registration_fee, justify=tk.LEFT, font=("Times New Roman", 11), bg="white")
124 label.grid(row=0, column=0, padx=10, pady=5)
125 registration_fee.set(registration_fee_info)
126

```

Figure 5


```

126
127 # Label to display the calculated registration fee
128 registration_fee_label = tk.Label(registration_fee_and_discount_frame, text="", font=("Times New Roman", 11), bg="gray")
129 registration_fee_label.grid(row=1, column=0, padx=10, pady=5)
130
131 # Register button for user to complete their registration process
132 register_button = tk.Button(text="Register", font=("Times New Roman", 11), bg="gray", command=collect_data)
133 register_button.grid(row=6, pady=20)
134 register_button.config
135
136 # Configure grid weights to make the frames expandable
137 frame.columnconfigure(0, weight=1)
138 frame.rowconfigure(0, weight=1)
139
140 root.mainloop()

```

Figure 6

4.0 SNAPSHOT OF GUI

This GUI shows the form of 5K Run Registration. The participant information will save information about the user who wants to register. In participant information, the user needs to insert their full name, email, phone number, age, and gender.

After that, the participants can see the description of the registration fee and discount. This part, it showed if the participant or user aged under 18 will get a 10% discount for the registration fee. Meanwhile, participants aged 50 and above will get a 15% discount for the registration fee. The use of this description is to let participant know the value of fee registration for the 5K Run and what kind of discount they will get.

When user click the “Register” button, it will automatically show the registration fee that the participant needs to pay and the registration process will be complete.

5K Run Registration Form

5K RUN REGISTRATION

Participant Information

Full Name: MAIMUNAH BT MARKUF

Email: maimunahmarkuf@gmail.com

Number Phone: 0135678943

Age: 55

Gender: Female

Registration Fee and Discount

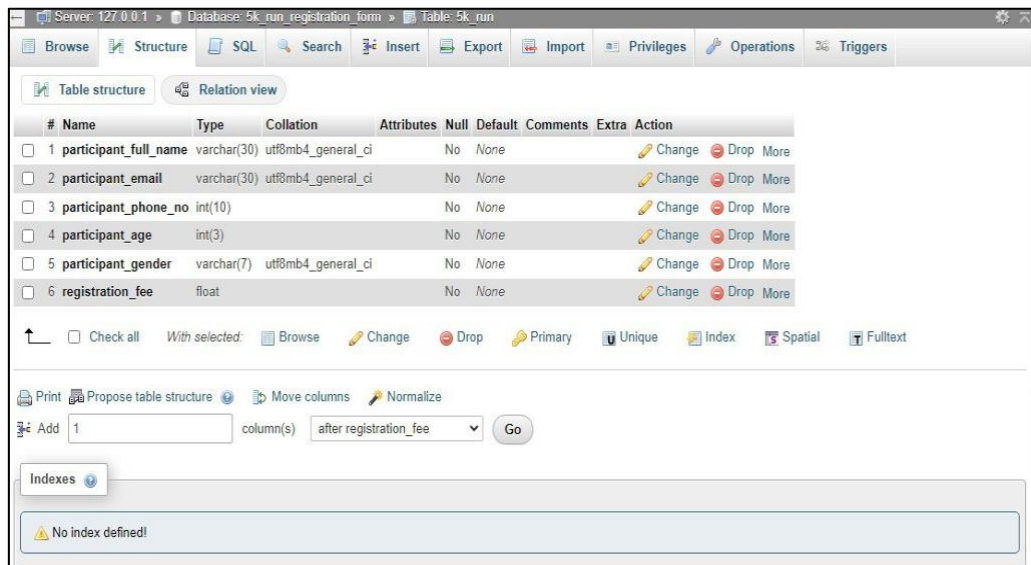
The registration fee is only RM25
Participant age under 18 will get 10% discount
Participant age 50 and above will get 15% discount

Your registration fee is RM 21.25

Register

Figure 7: GUI of 5K Run Registration Form

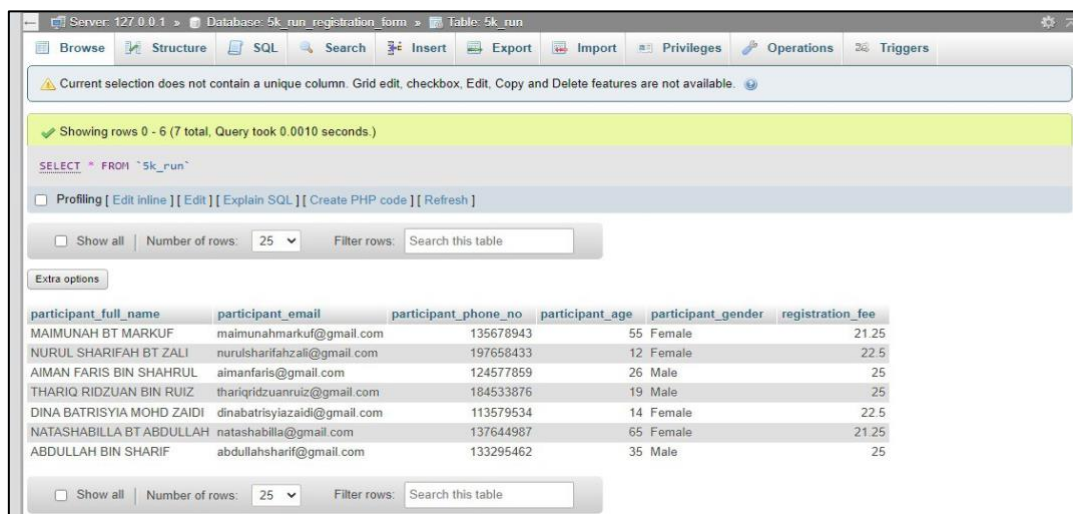
5.0 SNAPSHOT OF DATABASE



The screenshot shows the 'Table structure' view for a table named '5k_run' in a database named '5k_run_registration_form'. The table has six columns: participant_full_name, participant_email, participant_phone_no, participant_age, participant_gender, and registration_fee. Each column has a checkbox for selection and a set of actions (Change, Drop, More). Below the table structure, there is a section for indexes, which currently shows 'No index defined!'.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 participant_full_name	varchar(30)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	2 participant_email	varchar(30)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	3 participant_phone_no	int(10)			No	None			Change Drop More
<input type="checkbox"/>	4 participant_age	int(3)			No	None			Change Drop More
<input type="checkbox"/>	5 participant_gender	varchar(7)	utf8mb4_general_ci		No	None			Change Drop More
<input type="checkbox"/>	6 registration_fee	float			No	None			Change Drop More

Figure 8: Structure of attributes in the table



The screenshot shows the 'Table structure' view for the '5k_run' table, but the 'Relation view' tab is selected, displaying the data. A message at the top states: 'Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.' Below this, a green bar indicates 'Showing rows 0 - 6 (7 total, Query took 0.0010 seconds.)'. The SQL query shown is 'SELECT * FROM `5k_run`'. Below the query, there are options for 'Profiling' and 'Show all'. The table displays 7 rows of participant information, including full name, email, phone number, age, gender, and registration fee.

participant_full_name	participant_email	participant_phone_no	participant_age	participant_gender	registration_fee
MAIMUNAH BT MARKUF	maimunahmarkuf@gmail.com	135678943	55	Female	21.25
NURUL SHARIFAH BT ZALI	nurulsharifahzali@gmail.com	197658433	12	Female	22.5
AIMAN FARIS BIN SHAHRUL	aimanfaris@gmail.com	124577859	26	Male	25
THARIQ RIDZUAN BIN RUIZ	thariqidzuanruiz@gmail.com	184533876	19	Male	25
DINA BATRISYIA MOHD ZAIDI	dinabatrissyiazaidi@gmail.com	113579534	14	Female	22.5
NATASHABILLA BT ABDULLAH	natashabilla@gmail.com	137644987	65	Female	21.25
ABDULLAH BIN SHARIF	abdullahsharif@gmail.com	133295462	35	Male	25

Figure 9: Participant Information

6.0 CONCLUSION

In the conclusion, this 5K Run Registration form will make someone who likes to engage in running event more active to join this kind of activity. This is because, this registration form will make their work easy to join because it's only need a few information and within single click they already successful to join the event.

Moreover, with various level of age that open within 12 years old until 100 years old citizen are open for this event. With this it will make the event very lively. The discount of fee registration is also will bring a good feedback by citizen who want to join.