



اَبُوْ رَسِيْطِيْ تِيْكَوْ لُوْ كِيْ مَارَا
UNIVERSITI
TEKNOLOGI
MARA

COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS UNIVERSITI
TEKNOLOGI MARA MERBOK KEDAH

DIPLOMA IN LIBRARY INFORMATIC
(IM 144)

PROGRAMMING FOR LIBRARIES
(IML208)

INDIVIDUAL ASSIGNMENT:
" BADMINTON RESERVATION SYSTEM"

PREPARED BY:
NURRUL HAIRIENA BINTI ARZA
(2022829308)
CLASS: KIM 1443E

PREPARED FOR:
SIR AIRUL SHAZWAN BIN NORSHAHIMI

SUBMISSION DATE:
4 JANUARI 2024

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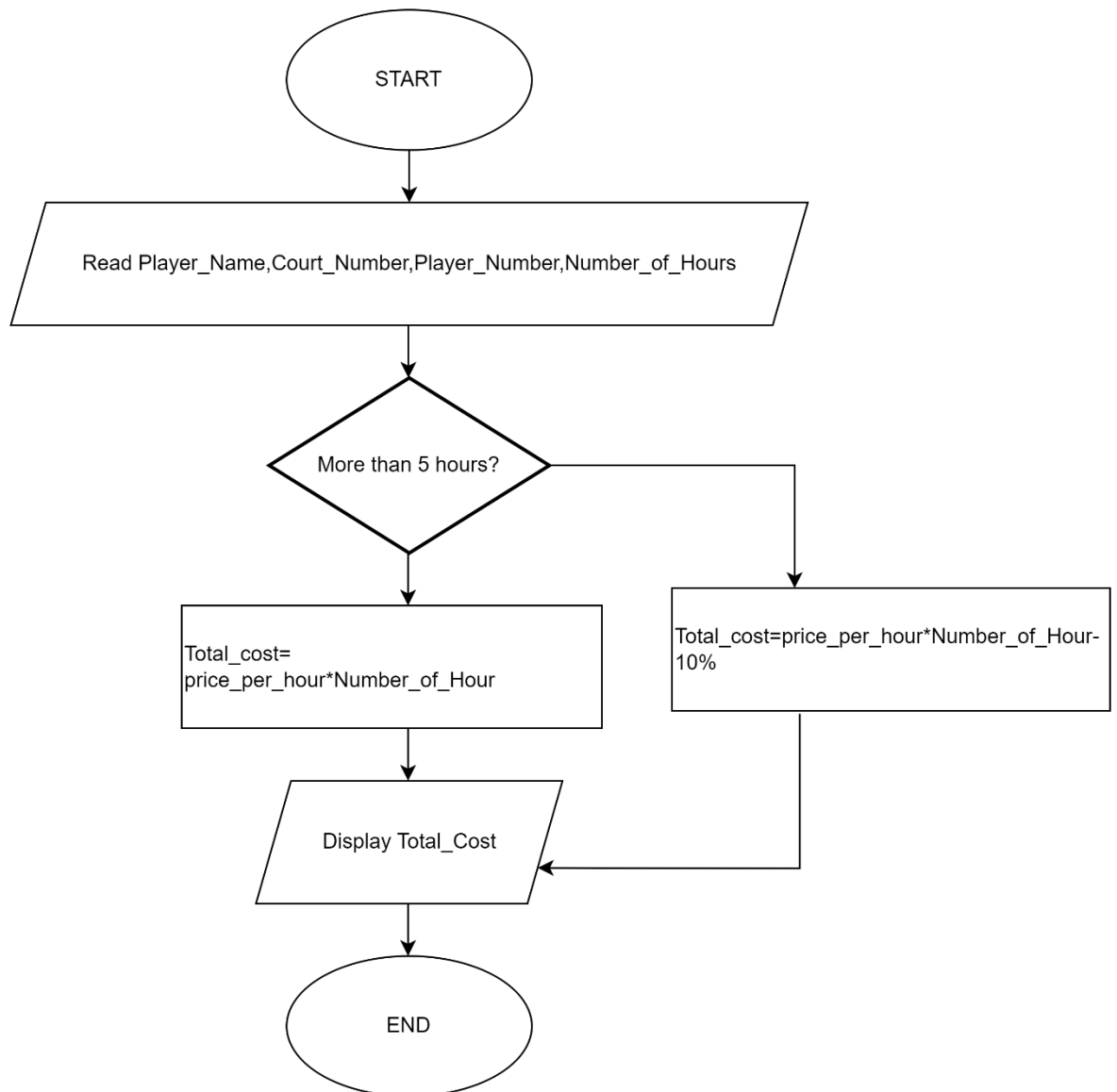
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1.0 INTRODUCTION

The intended design, known as the Badminton Reservation System, aims to transform the way badminton players reserve courts. This intuitive programme seamlessly combines the power of MySQL for efficient data administration with the interactive graphical user interface provided by Python's tkinter module. The system provides players with an easier way to make court reservations, whether they are for themselves or for big tournaments. With convenience, players may choose their favourite court, input their details, and schedule the play time. The programme guarantees a reasonable and clear pricing structure by continuously calculating the overall cost and including reductions for extended play periods. This strategy seeks to reduce the lack of interaction between the participants and the system by facilitating a smoother reservation process. the Badminton Reservation System, a planned design with the goal of changing the way badminton players reserve courts. The capabilities of MySQL for effective data management and Python's tkinter module for an interactive graphical user interface are effortlessly combined in this user-friendly application. In order to make court reservations easier for players or any other customer alike, the system gives players an easier method. Players can select their preferred court, enter their information, and set the play time with ease. All the user data will be saved in the database for badminton reservations. Other than that, a fair and open price structure is ensured by the programme, which continually determines the total cost and includes decreases for longer play sessions. By supporting a smoother reservation procedure, this approach seeks to close the communication gap between the system and players.

2.0 FLOWCHART



3.0 SNAPSHOT OF PYTHON CODE

```
file Edit Selection View Go Run ... week2_activity1
BADMINTON_RESERVATION1.py X
BADMINTON_RESERVATION1.py > ...
1 import tkinter as tk
2 from tkinter import ttk
3 from tkinter import messagebox
4 import mysql.connector
5
6 # Connect to MySQL
7 mydb = mysql.connector.connect(
8     host="localhost",
9     user="root",
10    password="",
11    database="badminton_reservation"
12 )
13 cursor = mydb.cursor()
14
15 def calculate_cost():
16     number_of_hours = int(number_of_hours_spinbox.get())
17     number_of_players = int(number_of_players_spinbox.get())
18
19     # price 15.00 per hour
20     price_per_hour = 15.00
21
22     # Calculate the total cost
23     total_cost = price_per_hour * number_of_hours
24
25     # Apply a 10% discount if the player plays more than 5 hours
26     if number_of_hours > 5:
27         discount_percentage = 10
28         discount_amount = (total_cost * discount_percentage) / 100
29         total_cost -= discount_amount
30
31     cost_label.config(text=f"Total Price: RM{total_cost:.2f}", font=("Cooper Black", 12, "bold"))
32     return total_cost
33
```

```
file Edit Selection View Go Run ... week2_activity1
BADMINTON_RESERVATION1.py X
BADMINTON_RESERVATION1.py > ...
35
36
37 def enter_data():
38     player_name = player_name_entry.get()
39     court_number = court_number_combobox.get()
40     number_of_players = int(number_of_players_spinbox.get())
41     number_of_hours = int(number_of_hours_spinbox.get())
42     total_cost = calculate_cost()
43
44     print("Player Name:", player_name)
45     print("Court Number:", court_number)
46     print("Number of players:", number_of_players)
47     print("Number of Hours:", number_of_hours)
48     print("Total Cost:", total_cost)
49     print("-----")
50
51     # Inserting data into the "court booking" table
52     sql = "INSERT INTO court_booking (player_name, court_number, number_of_players, number_of_hours, total_cost) VALUES (%s, %s, %s, %s, %s)"
53     values = (player_name, court_number, number_of_players, number_of_hours, total_cost)
54
55     try:
56         cursor.execute(sql, values)
57         mydb.commit()
58         print("Data inserted successfully!")
59     except mysql.connector.Error as err:
60         print(f"Error: {err}")
61         mydb.rollback()
62
63 #my window title
64 window = tk.Tk()
65 window.title("Badminton Reservation System",)
66
```

```

File Edit Selection View Go Run ... week2_activity1
BADMINTON_RESERVATION1.py X
BADMINTON_RESERVATION1.py > ...
66
67 frame = tk.Frame(window)
68 frame.pack()
69
70 # Player Info Frame
71 player_info_frame = tk.LabelFrame(frame, text="Court Booking", font=("Cooper Black",12),bg="olivedrab3")
72 player_info_frame.grid(row=0, column=0, padx=20, pady=10)
73
74 # Price Information
75 prices_text = tk.Text(player_info_frame, height=6, width=73)
76 prices_text.grid(row=0, column=0, columnspan=7, pady=10)
77
78 prices_text.insert(tk.END, "Prices per hour:\n")
79 prices_text.insert(tk.END, "1 hour: RM15.00\n")
80 prices_text.insert(tk.END, "Above than 5 hour discount 10%\n")
81 prices_text.configure(state='disabled')
82
83 # Player Information
84 tk.Label(player_info_frame, text="Player Name", font=("Cooper Black", 10)).grid(row=1, column=0)
85 player_name_entry = tk.Entry(player_info_frame, font=("Jumbo", 10, "bold"))
86 player_name_entry.grid(row=1, column=1, pady=4)
87
88 tk.Label(player_info_frame, text="Court Number", font=("Cooper Black", 10)).grid(row=1, column=2)
89 court_number_combobox = ttk.Combobox(player_info_frame, values=["C1", "C2", "C3", "C4"], font=("Jumbo", 10, "bold"))
90 court_number_combobox.grid(row=1, column=3, columnspan=2, pady=4)
91
92 tk.Label(player_info_frame, text="Number of hours", font=("Cooper Black", 10)).grid(row=3, column=2, pady=7)
93 number_of_hours_spinbox = ttk.Spinbox(player_info_frame, from_=1, to=10, font=("Jumbo", 10, "bold"))
94 number_of_hours_spinbox.grid(row=3, column=3, columnspan=2, pady=4)
95
96 tk.Label(player_info_frame, text="Player Number", font=("Cooper Black", 10)).grid(row=3, column=0, pady=8)
97 number_of_players_spinbox = ttk.Spinbox(player_info_frame, from_=1, to=20, font=("Jumbo", 10, "bold"))
98 number_of_players_spinbox.grid(row=3, column=1, pady=4)

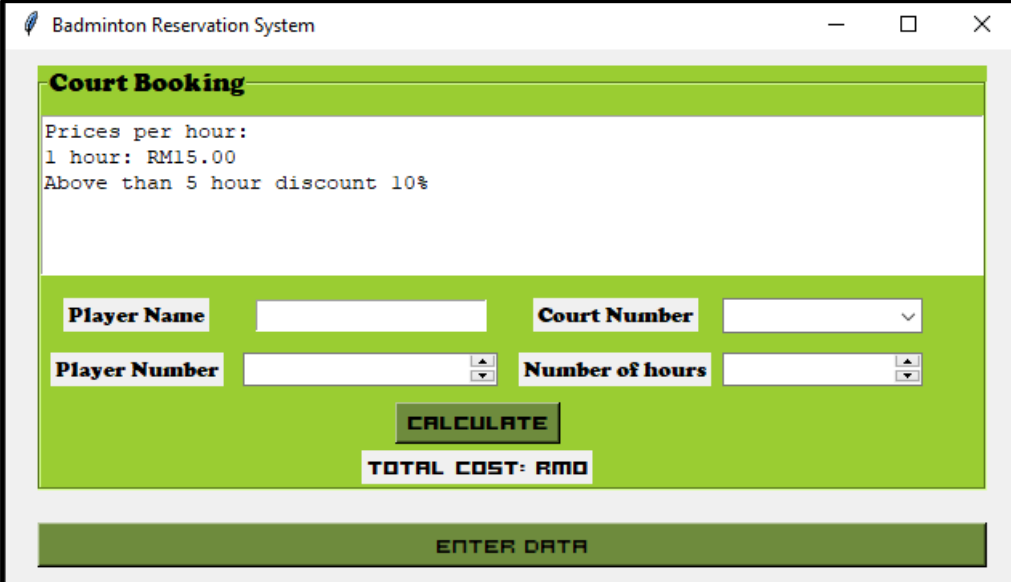
```

```

File Edit Selection View Go Run ... week2_activity1
BADMINTON_RESERVATION1.py X
BADMINTON_RESERVATION1.py > ...
97 number_of_players_spinbox = ttk.Spinbox(player_info_frame, from_=1, to=20, font=("Jumbo", 10, "bold"))
98 number_of_players_spinbox.grid(row=3, column=1, pady=4)
99
100 # Cost Calculation
101 calculate_button = tk.Button(player_info_frame, text="Calculate", command=calculate_cost, font=("hooge 05_53", 9, "bold"),bg="darkolivegreen4")
102 calculate_button.grid(row=6, column=1, columnspan=2, pady=2)
103
104 cost_label = tk.Label(player_info_frame, text="Total Cost: RM0", font=("hooge 05_53", 9, "bold"))
105 cost_label.grid(row=7, column=1, columnspan=2, pady=2)
106
107 # Button inserts data into my SQL
108 button = tk.Button(frame, text="Enter data", command=enter_data,font=("hooge 05_53",10), bg="darkolivegreen4")
109 button.grid(row=3, column=0, sticky="news", padx=20, pady=10)
110
111 window.mainloop()
112
Ln 71, Col 61 Spaces: 4 UTF-8 CRLF Python 3.11.7 64-bit (Microsoft Sto

```


4.0 SNAPSHOT OF GUI



The screenshot displays a window titled "Badminton Reservation System" with standard window controls. Inside, a green-bordered box is titled "Court Booking".

Below the title, the pricing information is listed:

Prices per hour:
1 hour: RM15.00
Above than 5 hour discount 10%

The form contains four input fields:

- Player Name**: A text input field.
- Court Number**: A dropdown menu.
- Player Number**: A text input field with up and down arrow buttons.
- Number of hours**: A text input field with up and down arrow buttons.

A green **CALCULATE** button is positioned below the input fields. Below this button, the text **TOTAL COST: RM0** is displayed.

At the bottom of the window, there is a green bar with the text **ENTER DATA**.

5.0 SNAPSHOT OF DATABASE

The screenshot shows the phpMyAdmin interface for the 'badminton_reservation' database. The left sidebar shows the database structure with 'court_booking' selected. The main panel displays the 'Structure' tab for the 'court_booking' table. The table has 13 rows and is using InnoDB engine with utf8mb4_general_ci collation. The table size is 16.0 KiB and the overhead is 0 B.

Table	Action	Rows	Type	Collation	Size	Overhead
court_booking	Browse Structure Search Insert Empty Drop	13	InnoDB	utf8mb4_general_ci	16.0 KiB	-
1 table	Sum	13	InnoDB	utf8mb4_general_ci	16.0 KiB	0 B

The screenshot shows the phpMyAdmin interface for the 'badminton_reservation' database, specifically the 'court_booking' table. The 'Browse' tab is selected, displaying the table data. The table has 13 rows and 5 columns: player_name, court_number, number_of_players, number_of_hours, and total_cost. The data is as follows:

player_name	court_number	number_of_players	number_of_hours	total_cost
hairiena	C2	16	3	400
lfa	C2	1	2	20
hairiena	C4	1	3	75
hairiena	C4	1	3	75
umairah	C2	2	6	228
siti	C3	3	3	75
om	C2	1	7	299
Y	C4	5	6	81
Y	C4	2	4	60
Kiki	C2	3	9	122
Kiki	C2	3	1	15
Kiki	C2	3	5	75
hairiena	C2	1	9	122