

## BACS2093 Operating Systems (Practical Assignment) AY 202305

<b><u>Course Learning</u></b>	CLO3: Write shell scripting in UNIX/LINUX commands to create complex programs. (P2, PLO3)
<b><u>Team Organization</u></b>	<p><b>This is a group assignment. Students are to work in a team of 2 members.</b></p> <p>Even though this is a team assignment, each team member should participate in preparing every deliverable required in the assignment and the marks will be given base on each individual contribution.</p>
<b><u>Academic Impropriety</u></b>	<p><b>You may only work with the students in your team to produce your answer.</b></p> <p>Your attention is drawn to the University Guidelines on Avoiding Plagiarism. This covers cheating, attempt to cheat, plagiarism, collusion and any other attempts to gain an unfair advantage in assessment.</p> <p><b>The work you submit must conform to these regulations.</b></p>
<b><u>Late Submission</u></b>	<p>With the exception of EMC reasons, penalty for late submission of coursework shall be imposed after the submission deadline / extended submission deadline:</p> <ul style="list-style-type: none"> <li>i) Late submission within 1 - 3 days: total marks to be deducted is 10 marks.</li> <li>ii) Late submission within 4 - 7 days: total marks to be deducted is 20 marks.</li> <li>iii) Late submission after 7 days: reject coursework and zero mark shall be awarded.</li> </ul> <p>For any late submission of assignment, student shall complete the Late Submission of Coursework Form (as attached) and attach it together with their coursework. The lecturer/tutor shall also acknowledge receipt in the form.</p>
<b><u>Submission Deadlines</u></b>	<b>Week 12 Saturday (before 12 noon)</b>

**\*\* Important Note: All tasks below should provide comprehensive validations.**

### **Task 1:**

Create a menu script that has the following selections (Figure 1):

**University Venue Management Menu**

  

A – Register New Patron  
 B – Search Patron Details  
 C – Add New Venue  
 D – List Venue  
 E – Book Venue

  

Q – Exit from Program

  

Please select a choice:

**Figure 1: University Venue Management Menu**

## Task 2:

If the user has selected “A” to **Register Patron**, the system should request the user to enter the Patron details. The output of the screen should be similar to Figure 2.

### Patron Registration

=====

Patron ID (As per TAR UMT format) :

Patron Full Name (As per NRIC) :

Contact Number :

Email Address (As per TAR UMT format) :

Register Another Patron? (y) es or (q) uit :

Press (q) to return to **University Venue Management Menu**.

**Figure 2: Patron Registration**

The output of the Patron details should be stored in the **patron.txt** file. Refer to Sample 1.

```
230812:Tan Mei Lee:012-9999999:tanml-wp23@student.tarc.edu.my
230999:Kang KingKong:012-5555555:kangkk-wp23@student.tarc.edu.my
1234:Chin Chai Lim:016-1234567:clchin@tarc.edu.my
```

**Sample 1: Patron.txt**

If the user has selected “B” to **Search Patron details**, the system should redirect the user to “Search Patron Details”. The output of the screen should be similar to Figure 3.

### Search Patron Details

Enter Patron ID: 230812

Full Name (auto display): Tan Mei Li

Contact Number (auto display): 012-9999999

Email Address (auto display): tanml-wp23@student.tarc.edu.my

Search Another Patron? (y)es or (q)uit :

Press (q) to return to **University Venue Management Menu**.

**Figure 3: Search Patron Details Form**

### Task 3

If the user has selected “C” to **Add New Venue** the output of the screen should be similar to Figure 4.

**Add New Venue**  
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Block Name:  
Room Number:  
Room Type:  
Capacity:  
Remarks:  
Status (by default): Available

Add Another New Venue? (y)es or (q)uit :

Press (q) to return to **University Venue Management Menu**.

**Figure 4: Add New Venue**

The output of the University Venue details should be stored in **venue.txt** file. Refer to Sample 2.

```
BlockName:RoomNumber:RoomType:Capacity:Remarks
SG:SG001:Lecture Hall:300:New venue available for booking
K:K100:Tutorial Room:26:Under maintenance
B:B001:Lab:26:For practical use only
```

**Sample 2: venue.txt**

If the user has selected “D” to display all venues after entering the block name, the system should redirect the user to “**List Venue Details**”. The output of the screen should be similar to Figure 5.

<u>List Venue Details</u>				
Enter Block Name: B				
Room Number:	Room Type:	Capacity:	Remarks:	Status:
B001A	Lab	24	For practical use only	Available
B001B	Lab	26	For practical use only	Unavailable
Search Another Block Venue? (y)es or (q)uit :				
Press (q) to return to <b>University Venue Management Menu</b> .				

**Figure 5: List Venue Details**

#### Task 4:

If user has selected “E” to **Book Venue**, the system should redirect the user to “Patron Details Validation Screen”. The output of the screen should be similar to Figure 6.

<p style="text-align: center;"><b>Patron Details Validation</b> =====</p> <p>Please enter the Patron’s ID Number: 230812</p> <p>Patron Name (auto display): Tan Mei Li</p> <p>Press <b>(n)</b> to proceed <b>Book Venue</b> or <b>(q)</b> to return to <b>University Venue Management Menu</b>:</p>
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**Figure 6: Patron Details Validation Form**

If the user has **Press (n)**, the system will redirect the user to “Book Venue Screen” in Figure 7.

<p style="text-align: center;"><b>Booing Venue</b> =====</p> <p>Please enter the Room Number : B001A</p> <p>Room Type (auto display): lab Capacity (auto display) : 24 Remarks (auto display) : For practical use only Status:</p>
<p>Notes: The booking hours shall be from 8am to 8pm only. The booking duration shall be at least 30 minutes per booking.</p> <p>Please <b>enter</b> the following details:</p> <p>Booking Date (mm/dd/yyyy) : Time From (hh:mm) : Time To (hh:mm) : Reasons for Booking:</p> <p>Press <b>(s)</b> to save and generate the venue booking details or Press <b>(c)</b> to cancel the Venue Booking and return to University Venue Management Menu:</p>

**Figure 7: Booking Venue**

**\*\*Note:** The date booking should be 1 day before the current date, and the time should follow the 24-hour clock time. The system should be able to check the room availability based on the booking.txt file.

If the user **Press (s)**, the system should save the booking details in booking.txt file (Refer to Sample 3). Then the system should generate the venue booking receipt to the user (Refer to Sample 4). If the user **Press (c)**, the system should clear data in the booking screen, and return to the University Venue Management Menu (Refer to Figure 1).

The output of the booking details in **booking.txt** file. Refer to Sample 3.

<p>PatronID:PatronName:RoomNumber:DateBooking:TimeFrom:TimeTo:ReasonsForBooking 230812:Tan Mei Lee:B001A:02/28/2023:14:00:16:00:For FYP Presentation</p>
<p style="text-align: center;"><b>Sample 3: booking.txt</b></p>

The output of results should be stored in an **ASCII text file** named PatronID\_RoomNumber\_BookingDate. (i.e. 1234\_B001A\_9-9-2023) (Refer to Sample 4) as shown below.

<b>Venue Booking Receipt</b>	
Patron ID : 230812	Patron Name : Tan Mei Lee
Room Number : B001A	
Date Booking: 02/28/2023	
Time From: 14:00	Time To: 16:00
Reason for Booking: For FYP presentation.	
 <b>This is a computer generated receipt with no signature required.</b>	
 <b>Printed on 9-9-2023 5.30pm.</b>	

**Sample 4: Output of University Venue Booking Receipt**

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~End~