

**University of Technology, Jamaica**  
**School of Computing and Information Technology**  
**Lab Examination – SEM 1 AY 2019/20**

**Module:** Operating Systems (CIT3002)

**Duration:** 24 HRS

**Instructions:**

Write a bash script for the Blackjack program (using Steps 1-5 below). Script should include at least:

- two control structures
- one array
- one function

*[2mks]*

**STEP 1:** From a deck of 32 cards draw four cards.

The first two belong to the computer and the last two to the player.

*[9mks]*

**STEP 2:** Display the following rules to user

*[2mks]*

**Rules:**

1. Jack Queen King are worth 10pts each

2. Ace has a value of 11

3. Numbered cards (2 through 10) maintain their value

4. You WIN, if

- Player = 21; then double wager
- Player < 21 & Computer < 21 & Player < Computer; then 1.5\*wager
- Player < 21 & Computer > 21; then 1.5\*wager

5. You LOSE wager, if

- Player > 21
- Player < 21 & Computer ≤ 21 & Computer < Player

What is your wager?

**STEP 3:** Accept wager from user then show the cards drawn for player

*[1+1mks]*

**STEP 4:** Add separately, the cards for player then the cards for computer.

*[13mks]*

If player's cards equal 21 provide an automatic win, then exit.

If player's cards are greater than 21 provide an automatic lose, then exit.

Otherwise provide the following instructions to player:

**S: Stop playing**

**H: Draw another card from deck**

**D: Double wager and draw one, and only one more card**

What is your choice?

**STEP 5:** Do the following based on players choice

*[17mks]*

If S – determine if win/lose, notify the player then

specify computer's cards and the amount earned and exit

If H – draw another card from the remaining deck,

check total value of cards (automatic win/lose still applies)

if still under 21, clear screen and repeat instructions for S, H, and D above

If D – double the wager and draw another card from the remaining deck,

determine if win/lose, notify the player then

specify computer's cards and the amount earned and exit

**Submission**

The script should be uploaded to Moodle before the time period expires or receive zero.

**\*\*\* END OF TEST \*\*\***

Total of 45 marks