



# COMSATS University Islamabad, Vehari Campus

## Department of Computer Science

**Course Instructor:** Rizwan Ali

**Course:** Principles of Operating Systems

**Lab :** Final Tern

**Semester:** Fall 2024

**Section:** BCS - 5B

**Marks:** 15

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### Question 1

```
#!/usr/bin/env bash
```

```
game() {  
    count=0  
    target=$((RANDOM % 20 + 1))  
    while true ; do  
        read -p "Enter any number b/w(1 to 20): " guess  
        count=$((1+count))  
        if ((guess == target)); then  
            echo "You guessed the correct number= $target"  
            echo "Total attempts made= $count"  
            break  
        else  
            echo "try again please"  
        fi  
    done  
}
```

```
even_odd() {  
    read -p "Enter a number: " number  
    if ((number % 2 == 0)); then
```

```
        echo "$number is even."
    else
        echo "$number is odd."
    fi
}
```

```
echo "Choose an option:"
echo "1 Play a number guessing Game"
echo "2 check number is Even or odd"
echo "3 invalid input"
```

```
read -p "Enter your choice : " choice
```

```
case $choice in
1)
    game;;
2)
    even_odd;;

3)
    echo "Invalid input please select a valid option";;

esac
```

## Question 2

```
#!/usr/bin/env bash
```

```
mkdir -p "ali"
```

```
echo "Created a folder named 'ali'."
```

```
for ((i = 1; i <= 15; i++)); do
```

```
    touch "ali/file_${i}_${date +%Y-%m-%d}.txt"
```

```
done
```

```
echo "15 files have been created inside the 'ali' folder."
```

```
mkdir -p "$HOME/tmp"
```

```
mkdir -p "$HOME/tmp/ahmad"
```

```
echo "Folder '$HOME/tmp/ahmad' has been created."
```

```
count=0
```

```
for file in ali/*; do
```

```
    if ((count < 5)); then
```

```
        mv "$file" "$HOME/tmp/ahmad"
```

```
        ((count++))
```

```
    fi
```

```
done
```

```
echo "5 files have been moved from 'ali' to '$HOME/tmp/ahmad'."
```

```
ls ali
```

```
count=0
```

```
for file in ali/*; do
```

```
    if ((count < 5)); then
```

```
        rm "$file"
```

```
        ((count++))
```

```
    fi
```

```
done
```

```
echo "5 files have been removed from 'ali'."
```

```
ls ali
```