RIPHAH INTERNATIONAL UNIVERSITY, ISLAMABAD

Lab # 10

Bachelors of Computer Science – 6th Semester

Subject: Operating System

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Lab Tasks

Exercise 1:

Put this code in a file and executes with two arguments.

```
echo “The following is the output of $0 script:”
echo “The total number of command line argument:$#”
echo “The first parameter:$1”
echo “The second parameter:$2”
```

Output:

1. Create File: nano script.sh

```
#!/bin/bash
echo "The following is the output of $0 script:"
echo "The total number of command line arguments: $#"
echo "The first parameter: $1"
echo "The second parameter: $2"
```

2. Execute:

```
chmod 777 script.sh
./script.sh arg1 arg2
```

Exercise 2:

Write a program to take value from user between 1 to 5.and display result like this:

1. …you pressed 1
2. …you pressed 2

Above 5…. invalid

Output:

1. Create File: nano program.sh

```
#!/bin/bash
read -p "Enter a number between 1 and 5: " number

if [[ $number -ge 1 && $number -le 5 ]]; then
   echo "...you pressed $number"
else
   echo "Above 5... invalid"
```

fi

2. Execute:

chmod 777 program.sh

./program.sh

Exercise 3:

There are three semesters in an academic year i.e. Fall (Aug-Jan), Spring (Feb-May) and Summer (Jun-July). Write a script which read current month from the user and determine running semester. For example if user enters current month either 1 or January or Jan the script should display “Fall Semester”.

Output:

1. Create File: nano semester.sh

```
#!/bin/bash
read -p "Enter the current month (number or name): " month

case $month in
   1|January|Jan)
      echo "Fall Semester"
      ;;
   2|February|Feb)
      echo "Spring Semester"
      ;;
   3|March|Mar)
      echo "Spring Semester"
      ;;
   4|April|Apr)
      echo "Spring Semester"
      ;;
   5|May)
      echo "Spring Semester"
      ;;
   6|June|Jun)
      echo "Summer Semester"
      ;;
   7|July|Jul)
      echo "Summer Semester"
      ;;
   8|August|Aug)
```

```
    echo "Fall Semester"
    ;;
  9|September|Sep)
    echo "Fall Semester"
    ;;
  10|October|Oct)
    echo "Fall Semester"
    ;;
  11|November|Nov)
    echo "Fall Semester"
    ;;
  12|December|Dec)
    echo "Fall Semester"
    ;;
  *)
    echo "Invalid month"
    ;;
Esac
```

2. Execute:

```
chmod 777 semester.sh
./semester.sh
```

Exercise 4:

Write a program in shell scripting and attached screenshots with explanations

1. Perform array and string code in shell scripting
2. Perform If Else code in Shell Scripting
3. Perform Case related code in shell scripting

Output:

1. Create File: nano examples.sh

```
#!/bin/bash

# Array example
colors=("red" "green" "blue")
echo "Array elements:"
for color in "${colors[@]}"; do
  echo "$color"
done
```

```
# String example
str="Hello, World!"
echo "String length: ${#str}"

# If-Else example
read -p "Enter a number: " num
if [ $num -gt 0 ]; then
   echo "$num is positive"
elif [ $num -lt 0 ]; then
   echo "$num is negative"
else
   echo "$num is zero"
fi

# Case example
read -p "Enter a grade (A, B, C): " grade
case $grade in
   A)
      echo "Excellent"
      ;;
   B)
      echo "Good"
      ;;
   C)
      echo "Average"
      ;;
   *)
      echo "Invalid grade"
      ;;
Esac
```

2. Execute:

```
chmod 777 examples.sh
./examples.sh
```