AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)

Faculty of Science & Technology

Department of Computer Science

Fall 2024-2025

OPERATING SYSTEM

Section: H

Final Assignment

Supervised By

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Submitted By:

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①

```
#!/bin/bash
numArray=(1 2 3 4 5)
sum=0
for i in "${numArray[@]}"; do
        sum=$((sum + i))
done
echo "sum: $sum"
```

②

```
#!/bin/bash
if [-f notes.txt]; then
    wc -w < notes.txt
else
    echo "File Not Found"
fi
```

③

```
#!/bin/bash
if [-f records.txt]; then
    wc -l records.txt
else
    echo "File Not Found"
fi
```

④

```
#!/bin/bash
if [-f log.txt]; then
    sed -i 's/error/issue/g' log.txt
    cat log.txt
else
    echo "File Not Found!"
```

⑤

```
#!/bin/bash
if [-f names.txt]; then
    wc -w < names.txt
else
    echo "Files Not Found!"
fi
```

⑥

```
#!/bin/bash
fibArray=(0 1 1 2 3 5 8 13 21 34)
sum=0
for i in "${fibArray[@]}"; do
        sum=$((sum + i))
done
echo "sum: " $sum"
```

⑦

```
#!/bin/bash
read -p "Enter a Number" n
fact=1
for ((i=1; i<=n; i++)); do
    fact=$((fact * i))
done
echo "Factorial: $fact"
```

(8)

```
#!bin/bash
if [-f info.txt ]; then
  head -n 10 info.txt
else
  echo "File Not Found!"
fi
```

(9)

```
#!bin/bash
array=(10 20 10 30 40 30 10)
echo "${array[@]}" | tr ' ' '\n' | sort | uniq -c
```

(10)

```
#!/bin/bash
if [-f data.txt ]; then
   tail -n 5 data.txt
else
  echo "File Not Found!"
fi
```

(11)

```
#!/bin/bash
if [-f output.txt ]; then
 count=$(grep -o "INFO" output.txt | wc -l)
 echo $count
else
  echo "File Not Found"
fi
```

(12)

```
#!/bin/bash
 if [-f log.txt ] ; then
   tac log.txt
 else
    echo "File Not Found"
```

(13)

```
#!/bin/bash
if [-f words.txt ]; then
  grep -i "priority" words.txt
else
   echo "File Not Found"
fi
```

(14)

```
#!/bin/bash
read -p "Enter Number of terms:" n
product=1
term=1
for((i=1; i<=n; i++)); do
  product=$((product * term))
  term=$((term * 10+1))
done
echo "Product : $product"
```

(15)

```
#!/bin/bash
read -p "Enter the Number of Terms:" n
product=1
term=10
for((i=1; i<=n; i++)); do
 product=$((product * term))
 term=$((term * 10))
done
echo "Product : $product"
```

(16)

```
#!/bin/bash
 a=(10 100 20 30 40 50 90)
 l=${a[@]}
 for i in "${a[@]}"; do
   if [ $i -gt $l ]; then
        l=$i
   fi
done
echo "Largest Element : $l"
```

(17)

```
#!/bin/bash
a=(1 2 3 4 5)
sum=0
for i in "${a[@]}"; do
   sum=$((sum+ i*i))
done
echo "Square sum : $sum"
```

(18)

```
#!/bin/bash
if grep -q "completed" task.txt; then
   echo "Word Exists"
else
   echo "Not Exists"
fi
```

(19)

```
#!/bin/bash
while IFS=' ' read -r line
do
 name_array=(${line})
 if [${#name_array[@]} -ge 3]; then

 echo "${name_array[2]}, ${name_array[1]}, ${name_array[0]}"
 else
  echo "Error!"
 fi
done < name.txt
```

(20)

```
#!/bin/bash
read -p "Enter the word:" word
 if [-f notes.txt]; then
  count=$(grep -o -w "$word" notes.txt | wc -l)
  echo = $count
 else
    echo "File Not Found!"
fi
```

(21)

```
#!/bin/bash
if [-f log.txt ];then
  sed -i '/^$/d' log.txt
  cat log.txt
else
  echo "File Not Found"
fi
```

(22)

```
#!/bin/bash
current_dir = $(pwd)

echo "Enter the File names:"
read -a filenames

for file in "${filenames[@]}"; do
 if [-f "$current_dir/$file" && "$file" == *.txt] ; then
     sort "$current_dir/$file"

 else
    echo "File Not Found"

 fi
done
```

(23)

```
#!/bin/bash
 if [-f data.txt ]; then
   stat --format=%s data.txt

 else
    echo "File Not Found!"
 fi
```

(24)

```
#!bin/bash

a=(5 10 8 20 7 15 4 18)
sum=0
for i in "${a[@]}"; do
  if [ $i -gt 10 ]; then
    sum=$((sum+i))
  fi
done
echo "sum: $sum"
```

(25)

```
#!/bin/bash
read -p "Enter your Name:" fn
first=$(echo $fn | cut -d ' ' -f 1)
last=$(echo $fn | cut -d ' ' -f 2)
echo "First Name: $first"
echo "Last Name: $last"
```

(26)

```
#!/bin/bash
read -p "search: " old
read -p "Replace: " new
if [-f document.txt ]; then
 sed i "s/$old /$new/g" document.txt
else
  echo "File Not Found!"
fi
```

(27)

```
#!/bin/bash
if [-f logfile.txt ]; then
   date >> logfile.txt
else
   echo "File Not Found"
fi
```

(28)

```
#!/bin/bash
 a=(1 2 3 4 5)
 sum=0
 aLen="${#a[@]}"
 for i in "${a[@]}"; do
    sum=$((sum + i))
 done
 avg=$(echo "$sum/$aLen" | bc)
 echo "Average : $avg"
```

(29)

```
#!/bin/bash
files=$(find . -maxdepth 1 -type f | wc -l)
dirs=$(find . -maxdepth 1 -type d | wc -l)

echo "Files : $files"
echo "Directories : $((dirs - 1))"
```

(30)

```
#!/bin/bash
if [-f data.txt]; then
   sort -r data.txt

else
   echo "Files Not Found!"

fi
```