Questions

Multiple Choice

1.0/1.0 point (graded)

A system has 4 cores. A user has 20 processes to run. To get the most responsive and efficient performance, the user has assigned 5 processes to each core. In such a case, the system is executing the processes in -

- ○ Parallel
- ○ Concurrent
- ◉ Both parallel and concurrent
- ○ None

✔

Submit You have used 1 of 1 attempt

Multiple Choice

1.0/1.0 point (graded)

System calls are executed in -

- ◯ Dual Mode
- ◉ Kernel Mode
- ◯ User Mode
- ◯ Boot Mode

✔

Submit You have used 1 of 1 attempt

Multiple Choice

1.0/1.0 point (graded)

Process P1 has used 2/4 of its execution time in I/O operation and 2/4 of its execution time in CPU operation. Such a information is stored in which part of the Process Control Block-

- ◯ Program Counter
- ◯ CPU register
- ◯ Memory Management Information

Accouting Information

✔

Submit You have used 1 of 1 attempt

Multiple Choice

0.0/1.0 point (graded)

At time 0, process P1 is executing. At time 4, the time slice of P1 is expired. So P1 is interrupted and sent to ready queue. Process P2 is then loaded into CPU for execution. At time 6, P2 has terminated. So, P1 is selected again for execution. At time 10, again P1's time slice is ended. And process P3 is loaded into CPU.

So, how many context switching occurs in the above scenario -

- 1
- 2
- 3 ✔
- 4

✖

Submit You have used 1 of 1 attempt

Answers are displayed within the problem

Question 2

3.0/4.0 points (graded)

Consider the following pseudo code snippet:

```
string division="Dhaka"
String[] codes = {"1206", "1000", "1216", "1212"};
public string getCode(string areaId, string name){
    string code = name+" Area code is: "+codes[areaId];
    return code;
}
public void printCode(){
    List<String> list = new ArrayList<String>(Arrays.asList(codes));
    for(String i:list){
        print(i);
    }
}
```

Now, after loading the program into memory, **Identify** at which section of the process memory, the variables of the above code snippet will reside -

The variable *areaId* will reside in :

Stack ✔

The variable *division* will reside in :

Data ✔

The variable *codes* will reside in :

Data ✔

The variable *list* will reside in :

Stack ✖

Submit You have used 1 of 2 attempts

Question 3

3.0/5.0 points (graded)

Assume, the system has 5 processes. Consider the following events occurring at times-

```
At time 5: P1 executes a command to read from disk.
At time 15: P5 is interrupted due to time slice expiry.
At time 18: P9 executes a command to write to disk.
At time 20: P3 executes a command to read from disk.
At time 24: P5 executes a command to write to disk.
At time 28: P5 is swapped out and in.
At time 33: An interrupt occurs from disk unit: P3's read is complete.
At time 36: An interrupt occurs from disk unit: P1's read is complete.
At time 38: P7 has ended its execution.
```

Now **At time 39, Identify** at which state (i.e. ready, running, waiting etc) each process is in. -

The state of process *P1* is :

Terminated ✖ **Answer:** Ready

The state of process *P3* is :

Terminated ✖ **Answer:** Ready

The state of process *P5* is :

Ready ✔ **Answer:** Ready

The state of process *P7* is :

Terminated ✔ **Answer:** Terminated

The state of process *P9* is :

Waiting ✔ **Answer:** Waiting

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

Instructions

1. Please copy the form link before the 30 minutes timer is ended. Here is the link - https://forms.gle/1W5HvSCgTiHxYP3y7

2. You will submit your rough work in the form. The form accepts **only pdf file**. The maximum file **size is 10 mb**. Make sure your file format and size is appropriate.

3. **Make sure you enter all your answers in bux first**. Only after submitting answers in bux, take images of your rough work and upload in the form. Submitting rough work is secondary.

4. You have to upload your work within 15 minutes of submitting exam in bux. Your bux submission time and google form submission time will be tracked.