

OPERATING SYSTEMS LABS



Lab task # 6

Submitted By

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Submitted to

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Q No.1:

C code:

```
#include <stdio.h>
```

```
#include <sys/types.h>
```

```
#include <unistd.h>
```

```
void forkexample()
```

fork();

fork();

fork();

fork();

fork();

fork();

```
fork();
```

```
fork();
```

```
printf("Hello");
```

$$\{$$

```
return 0;
```

[illegible]

i) How many processes will be created?

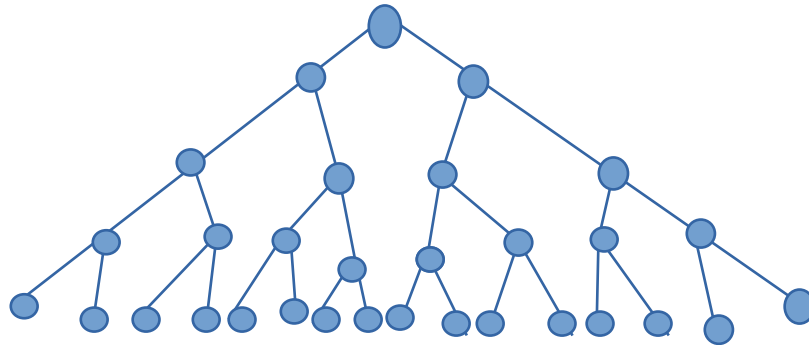
256 processes will be created because “ 2^8 (2 power 8) = 256 ” and we are doing `fork()` 8 times.

ii) How many times “Hello” word will be printed on the screen after code execution?

“Hello” word will be printed 256 times after code execution in which half will be by child processes and other half will be by parent processes.

iii) Create tree hierarchy for this pseudocode?

As provided instructions we are making hierarchy for first 4 forks.



Q No.2:

C code:

```
#include <stdio.h>
```

```
#include <sys/types.h>
```

```
#include <unistd.h>
```

```
void forkexample()
```

```
{
```

```
pid_t pid = fork();
```

```
if ( pid == 0)
```

```
{
```

```
fork();
```

```
fork();
```

```
printf("Hello");
```

```
printf("\n");
```

```
}
```

```
else
```

```
{
```

```
fork();
```

```
printf("Hello");
```

```
printf("\n");
```

```
}
```

```
}
```

```
int main()
```

```
{
```

```
forkexample();
```

```
return 0;
```

```
}
```

```

aitzaz@aitzaz-HP-ProBook-450-G5:~$ gcc lb.c -o lb
aitzaz@aitzaz-HP-ProBook-450-G5:~$ ./lb
Hello
Hello
Hello
Hello
Hello
Hello
aitzaz@aitzaz-HP-ProBook-450-G5:~$ █

```

i) How many processes will be created?

6 processes will be created.

ii) How many times “Hello” word will be printed on the screen after code execution?

“Hello” word will be printed 6 times after code execution.

iii) Create tree hierarchy for this pseudocode?

