

BLG312E – Operating Systems, Spring 2021

Assignment 1

Submission Deadline: 14.04.2021

Q 1 : Please investigate and run the given code piece below, and answer the following questions accordingly.

- a) How many process will be created by the code? How many of them will be identified as parent and children?
- b) Draw a tree that represents processes created by this program.
- c) How many times will *Fork* system call be invoked? Similarly, please answer how many *Printf* will be invoked?
- d) How will the output of the code look like, please explain it by giving an example. Is it possible to generate different outputs on , why?
- e) Manipulate the given code piece, so it will only create 4 process, including 1 parent and 3 children.

```
main()
{
    int i = 1;
    int result = 0;

    for (i = 1; i <= 3; i++)
    {
        result = fork();
        if (result == 0)
        {
            printf("Child process %d. \n",i);
        }
        else
        {
            printf("Parent process (i=%d). \n",i);
        }
    }
}
```