Wayne State University

CSC 4421 – Winter 2025

Computer Operating Systems Labs

Lab 3 – Process Control I

Points Possible: 100

Task 1 Coding (90 pts)

Create a C program which does the following:

-Create an integer array num_array consisting of the following elements: {1,2,3,4,5} -Creates a child process using fork.

-Check and manage for failed fork condition.

-Within the parent process, for each entry in num_array[], square the entry input and add that to summation variable.

-Within the child process, for each entry in num_array[], multiply the entry input by two and add that to summation variable.

-After the parent and child conditions are completed, output the value of sum and print out each element in num_array for both processes using one set of commands.

Task 2 Short Answer (10 pts)

Consider the following piece of C code:

```
void main( ) {
    fork( );
    fork( );
    exit( );
}
```

How many child processes are created upon execution of this program?

Task 1 Expected Output: