Program:  **System calls**

**1.fork()**

**a.**

Input:

#include <stdio.h>

#include <sys/types.h>

#include <unistd.h>

int main()

{

pid\_t pid;

pid = fork();

if (pid < 0) { // error occurred

printf("Fork failed!\n");

return 1;

}

else if (pid == 0) { // child process

printf("I am the child =%d\n", pid);

execlp("/bin/ls", "ls", NULL);

}

else { // parent process

printf("I am the parent, child pid=%d\n", pid);

wait(NULL);

printf("Parent exiting after child!\n");

}

return 0;

}

Output:

A screen shot of a computer code

Description automatically generated

**b.**

Input:

#include <stdio.h>

#include <sys/types.h>

void main(void)

{

pid\_t pid;

pid = fork();

if (pid == 0)

{

int i;

for (i = 1; i <= 50; i++)

printf(" This line is from child, value = %d\n", i);

printf(" \*\*\* Child process is done \*\*\*\n");

}

else

{

int i;

for (i = 1; i <= 50; i++)

printf("This line is from parent, value = %d\n", i);

printf("\*\*\* Parent is done \*\*\*\n");

}

}

Output:

A screenshot of a computer

Description automatically generated

A screenshot of a math test

Description automatically generated