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Cs149

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Homework-1

Q.1)

A screenshot of a video game

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int main() {

int i = 0;

if (fork() == 0) { -> Creates P-1

++i; Here i=1

if (fork() != 0) -> Creates another process in child Process P-1

i = 3; -> Updates P-1’s i=3

else

++i; -> adds the P-2’s i=2

fork(); -> This generates two other process from the child P-3 and P-4 where P-3= P-1 = i=2 and. P-4 = p-2 = i=2

} else {

i = 5; -> This updates the Main Process to i= 5

if (fork() == 0) -> Creates another process on the Main.

++i; -> P-5 = 6

}

return 0;

}

Thus the following process becomes

P-0 ( Main Process/Parent) => i=5

P-1 ( 1st child of Parent) =>. i= 3

P-2 (1st Child of P-1) => i=2

P-3 ( 2nd Child of P-1) => i=3

P-4( 1st child of P-2) => i=2

P-5(2nd Child of Parent) => I =6

Q.2

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Q.2.b)

When the given parent process(./Shell) exits our sleep child shell is. Still running. As it is in sleep state. This makes the. Child process to be an **Orphan Process.** When the process is exited the OS then finds a new parent for the orphan process and updates the parent id with the new process id. Thus in our case when the shell exited the child got a new parent id.

Q.2) The new Parent id :

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