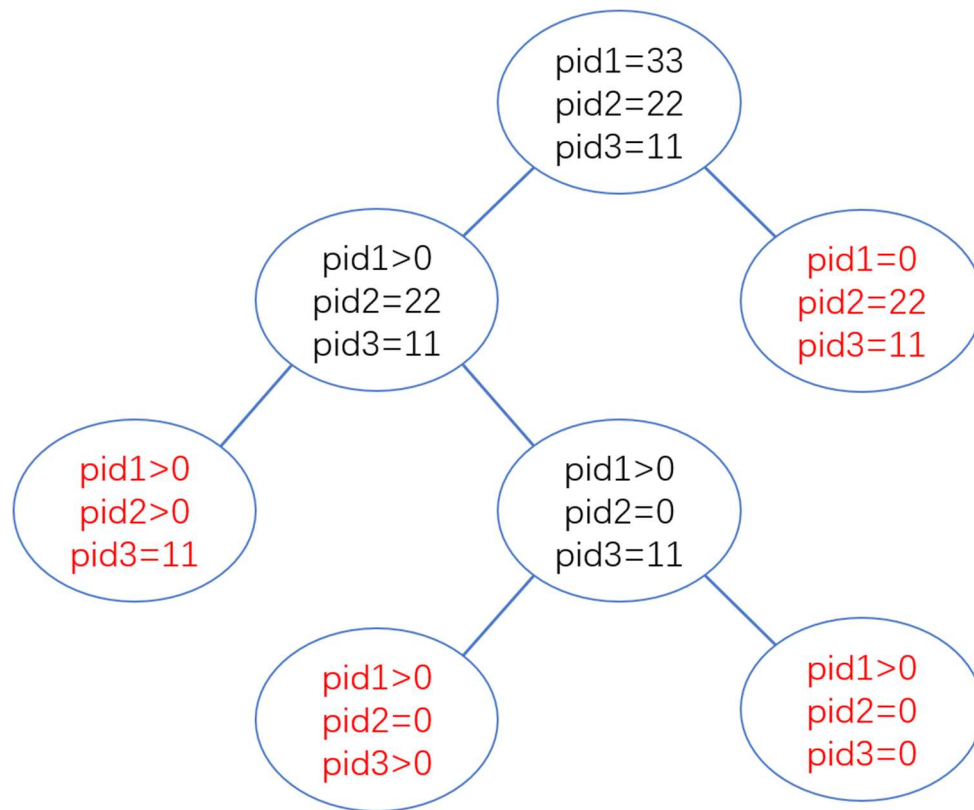
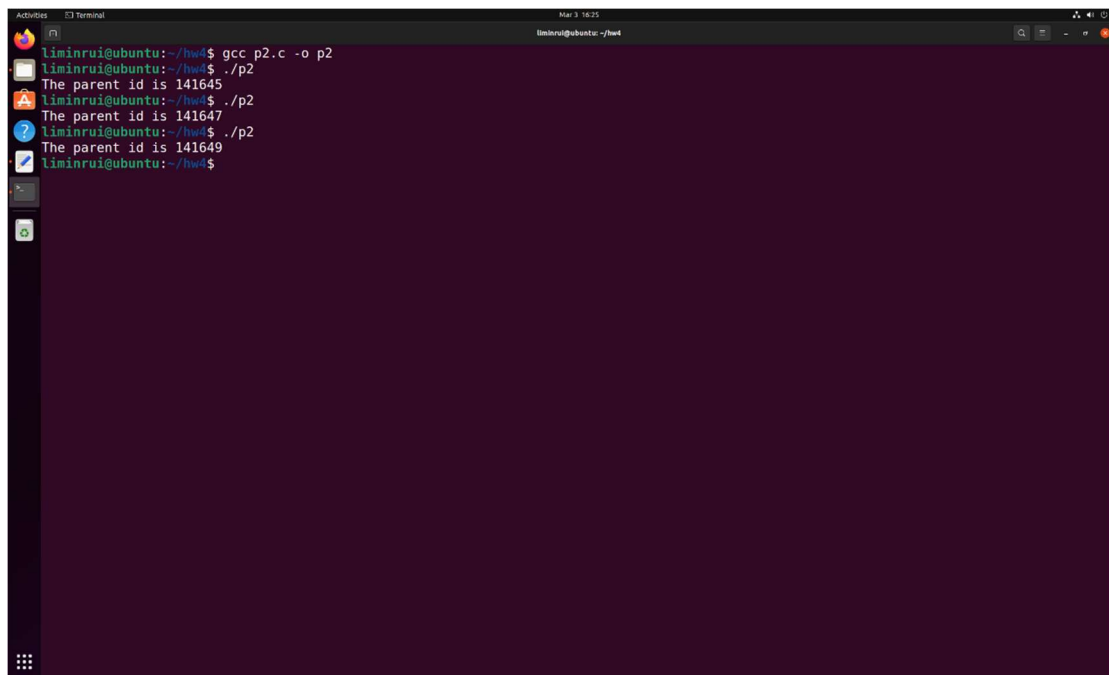


Q1.



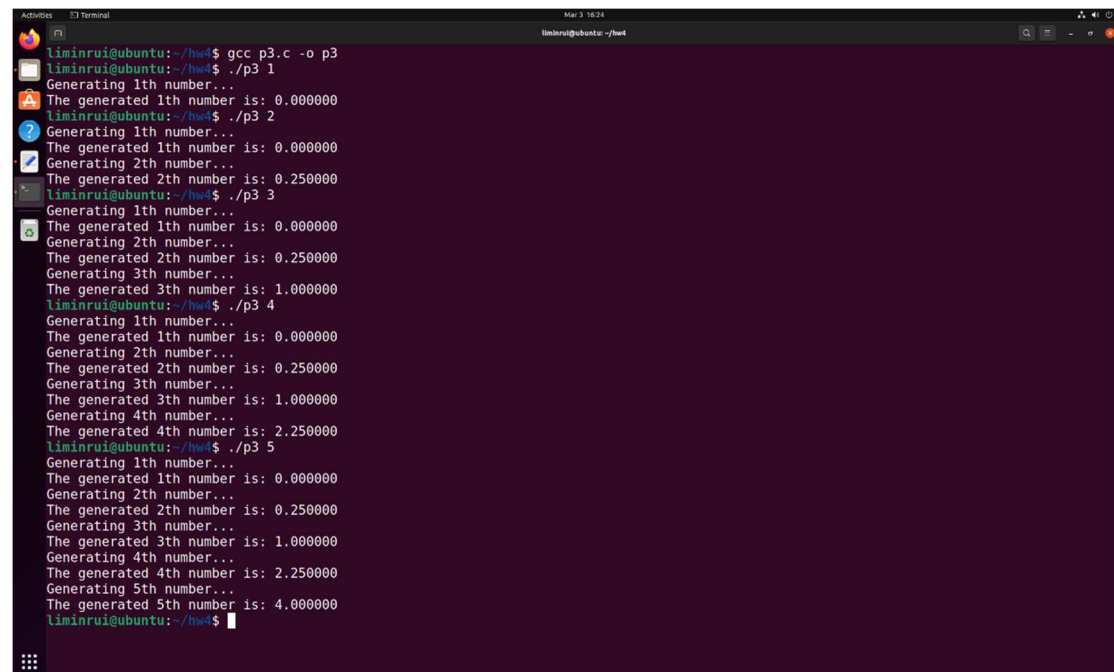
Q2.



```
liminrui@ubuntu:~/hw4$ gcc p2.c -o p2
liminrui@ubuntu:~/hw4$ ./p2
The parent id is 141645
liminrui@ubuntu:~/hw4$ ./p2
The parent id is 141647
liminrui@ubuntu:~/hw4$ ./p2
The parent id is 141649
liminrui@ubuntu:~/hw4$
```

The image shows a terminal window with a dark purple background. The window title is "Terminal" and it shows the user "liminrui" at "ubuntu" in the directory "~/hw4". The user has compiled a C program "p2.c" into "p2" using "gcc". They then executed "p2" three times, each time displaying "The parent id is" followed by a different PID: 141645, 141647, and 141649. The terminal window includes standard Ubuntu window controls and a sidebar with application icons.

Q3.



```
liminrui@ubuntu:~/hw4$ gcc p3.c -o p3
liminrui@ubuntu:~/hw4$ ./p3 1
Generating 1th number...
The generated 1th number is: 0.000000
liminrui@ubuntu:~/hw4$ ./p3 2
Generating 1th number...
The generated 1th number is: 0.000000
Generating 2th number...
The generated 2th number is: 0.250000
liminrui@ubuntu:~/hw4$ ./p3 3
Generating 1th number...
The generated 1th number is: 0.000000
Generating 2th number...
The generated 2th number is: 0.250000
Generating 3th number...
The generated 3th number is: 1.000000
liminrui@ubuntu:~/hw4$ ./p3 4
Generating 1th number...
The generated 1th number is: 0.000000
Generating 2th number...
The generated 2th number is: 0.250000
Generating 3th number...
The generated 3th number is: 1.000000
Generating 4th number...
The generated 4th number is: 2.250000
liminrui@ubuntu:~/hw4$ ./p3 5
Generating 1th number...
The generated 1th number is: 0.000000
Generating 2th number...
The generated 2th number is: 0.250000
Generating 3th number...
The generated 3th number is: 1.000000
Generating 4th number...
The generated 4th number is: 2.250000
Generating 5th number...
The generated 5th number is: 4.000000
liminrui@ubuntu:~/hw4$
```