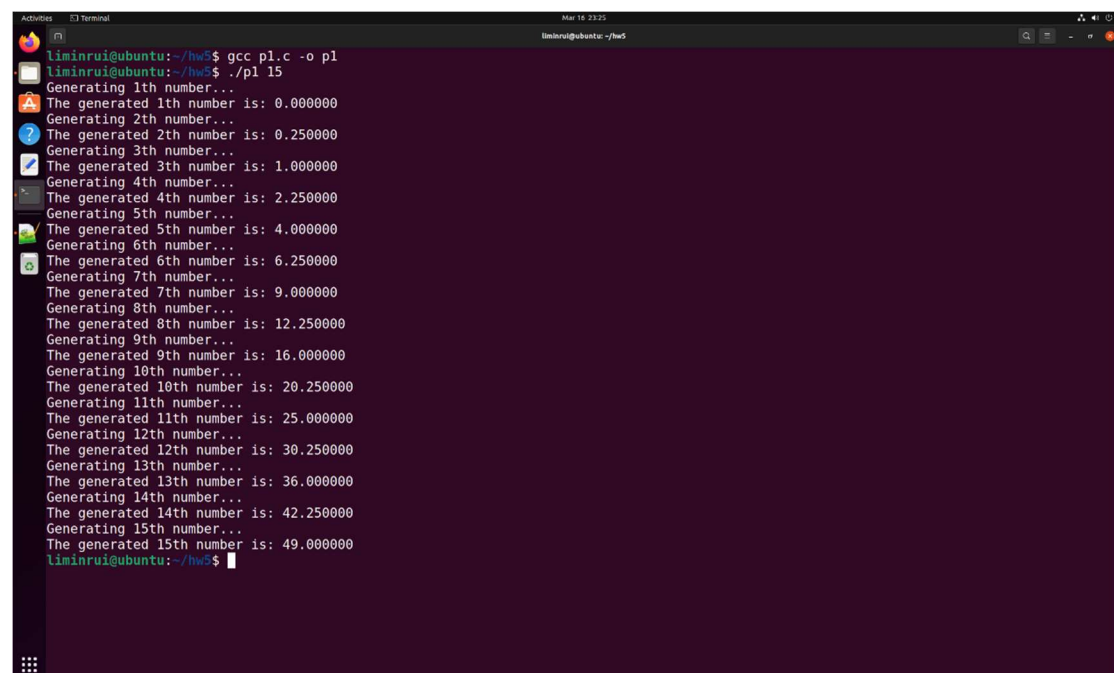


Q1)



The image shows a terminal window on a Linux system (Ubuntu) with the following content:

```
liminrui@ubuntu:~/hw5$ gcc p1.c -o p1
liminrui@ubuntu:~/hw5$ ./p1 15
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
Generating 6th number...
The generated 6th number is: 6.250000
Generating 7th number...
The generated 7th number is: 9.000000
Generating 8th number...
The generated 8th number is: 12.250000
Generating 9th number...
The generated 9th number is: 16.000000
Generating 10th number...
The generated 10th number is: 20.250000
Generating 11th number...
The generated 11th number is: 25.000000
Generating 12th number...
The generated 12th number is: 30.250000
Generating 13th number...
The generated 13th number is: 36.000000
Generating 14th number...
The generated 14th number is: 42.250000
Generating 15th number...
The generated 15th number is: 49.000000
liminrui@ubuntu:~/hw5$
```

The program generates an arithmetic sequence starting at 0.000000 with a common difference of 0.250000. The numbers are generated one by one, with a message for each. The terminal window has a dark purple background and a light blue border. The top bar shows the date and time as 'Mar 16 23:25'.

Q2)

```
liminrui@ubuntu:~/hw5$ gcc p2.c -o p2
liminrui@ubuntu:~/hw5$ ./p2 1
Generating 1th number...
The generated 1th number is: 0.000000
liminrui@ubuntu:~/hw5$ ./p2 2
Generating 1th number...
The generated 1th number is: 0.000000
Generating 2th number...
The generated 2th number is: 0.250000
liminrui@ubuntu:~/hw5$ ./p2 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:~/hw5$ ./p2 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:~/hw5$ ./p2 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:~/hw5$
```

Q3)

```
liminrui@ubuntu:~/hw5$ gcc p3.c -o p3
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.75%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.58%
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.64%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.63%
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.60%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.56%
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.71%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.57%
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.83%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.59%
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.81%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.61%
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.70%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.60%
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.70%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.58%
liminrui@ubuntu:~/hw5$ ./p3 23
The probability of two students in a 23 people class having the same birthday is 50.74%
liminrui@ubuntu:~/hw5$ ./p3 49
The probability of two students in a 49 people class having the same birthday is 96.59%
liminrui@ubuntu:~/hw5$
```