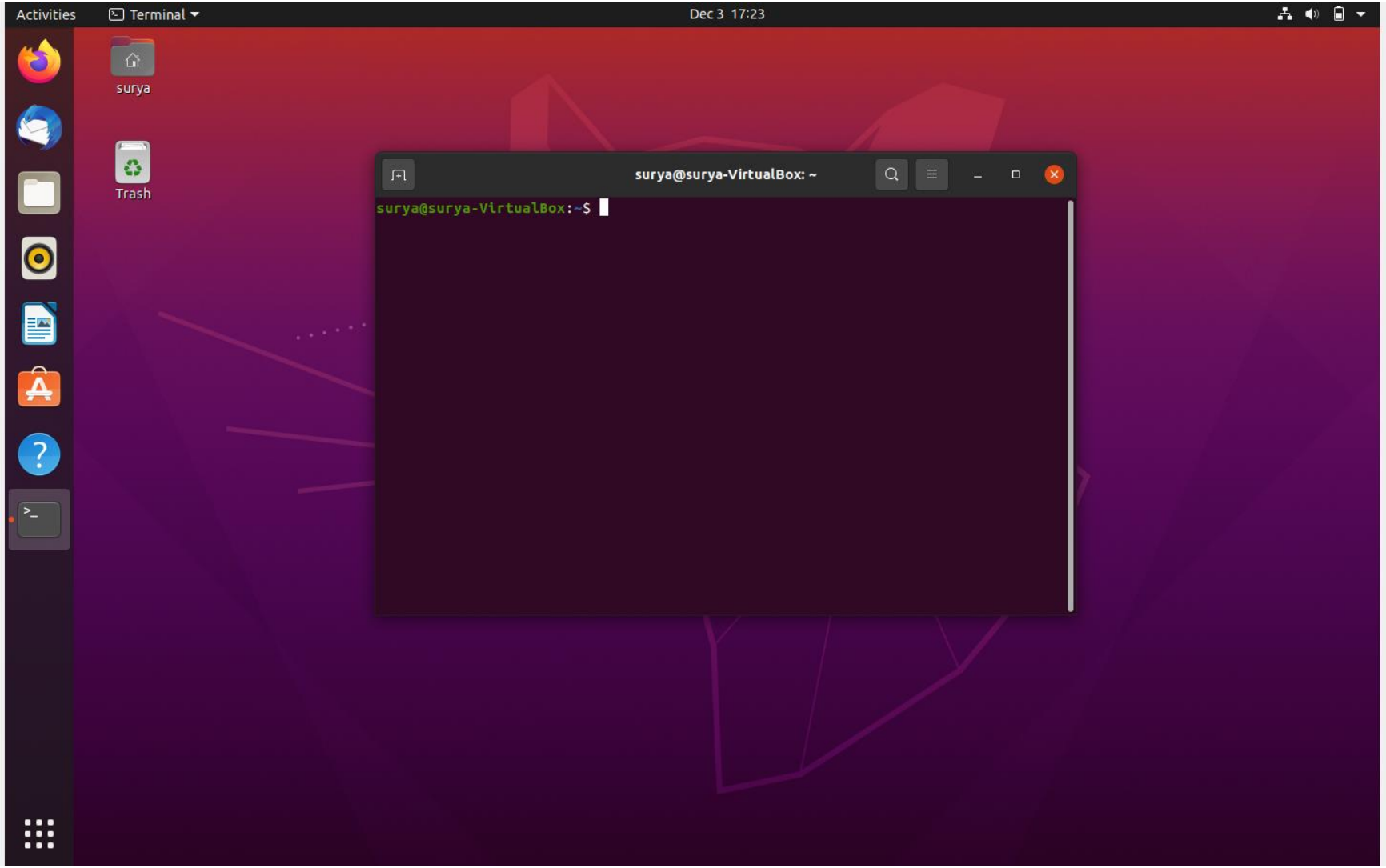
MA144: Problem Solving and Computer Programming

Lecture-4

Pseudocode Examples

Lab Environment

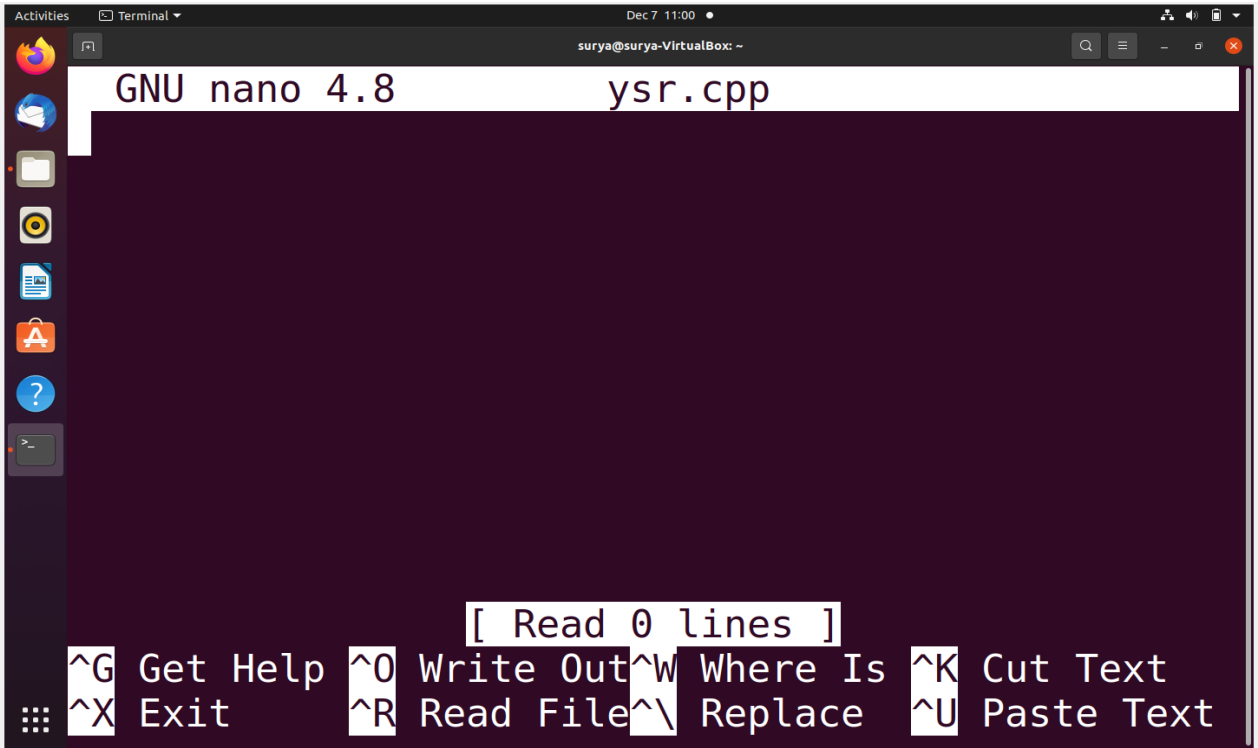
Step 1. Open up a terminal



Step 1. Open up a terminal contd…

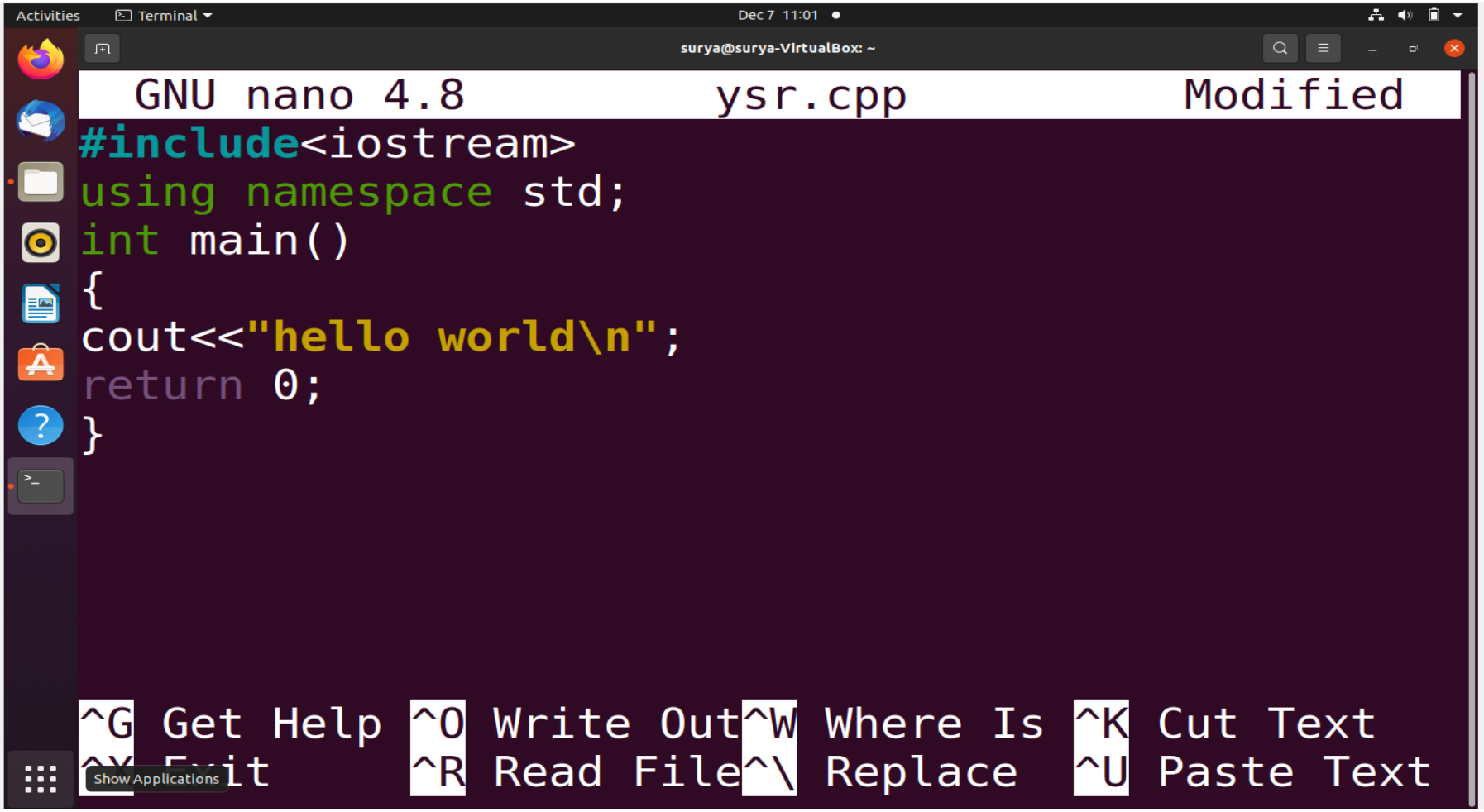
- Type the command nano <filename>.cpp

  e.g., nano ysr.cpp
- Then press enter
- After pressing enter, Automatically text editor will appear.



Step 1. Open up a terminal contd...

- Write your program here and press **ctrl+o** to save the program and press **enter.**
  To return out from editor **ctrl+x**

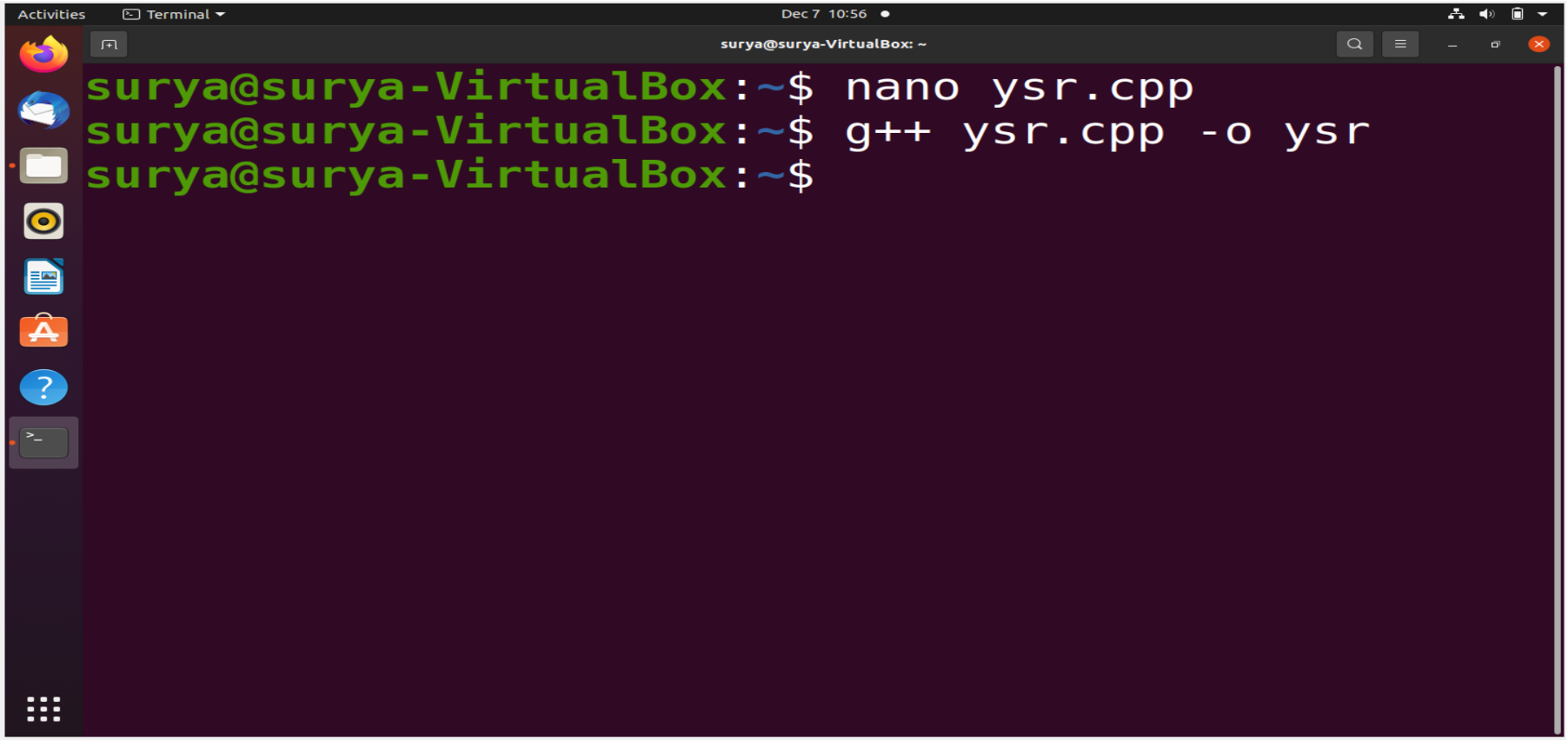


Step 2. Compile the program

- Type the command

g++ <filename>.cpp -o <filename>

e.g., **g++ ysr.cpp -o ysr**

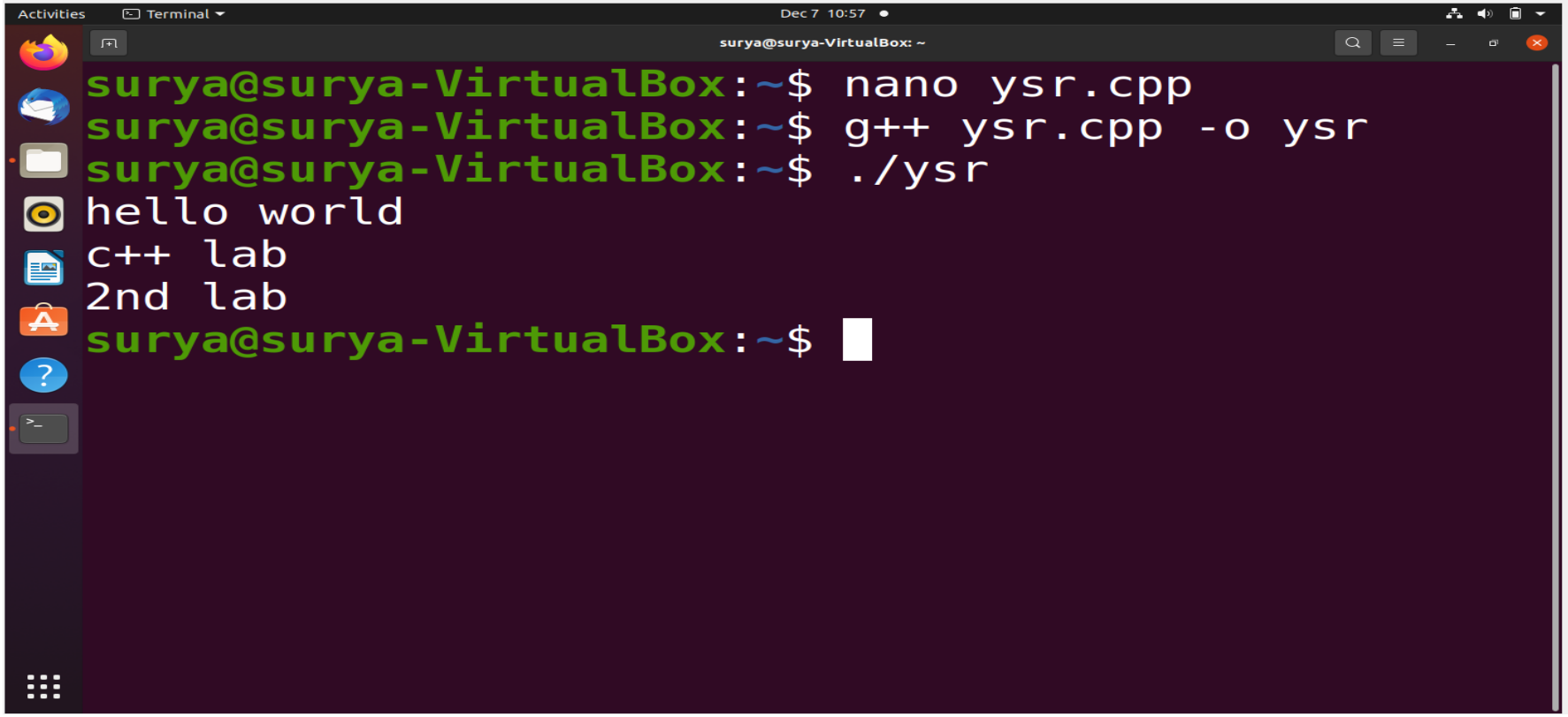


Step 3. Execute the program

- Type the command **./<filename>**

  e.g., **./ysr**

- Observe the output



Summary

1. In terminal, type **nano ysr.cpp** then enter
   - Write a program in text editor
   - Press **ctrl+o** to save the program and press **enter**
   - Press **ctrl+x** to exit the text editor

2. Type **g++ ysr.cpp -o ysr** to compile the program

3. Type **./ysr** to run the program

2. Type **g++ ysr.cpp** to compile
3. Type **./a.out** to run

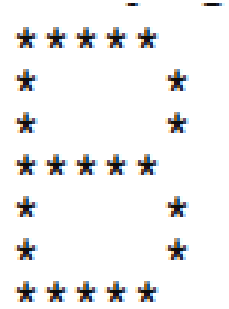
Sample Program

```
#include <iostream>
using namespace std;
int main()
{
    cout<< "*  *\n";
    cout<<"*    *\n";
    return 0;
}
```

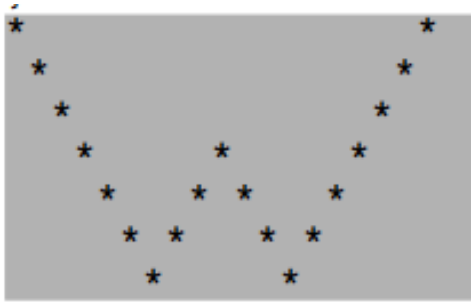
Lab 1: Assignment (6-12-2022)

1. Write a program to print your details like
   Name, Roll No, Branch, Address, etc.

2. Write a program that prints the block letter "B" in a 7 × 6 grid of stars as

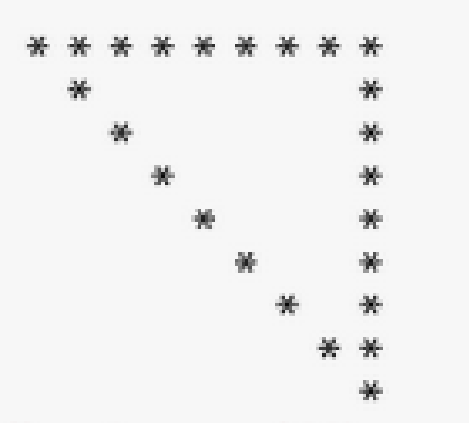


3. Write a program that prints the block letter "W" as

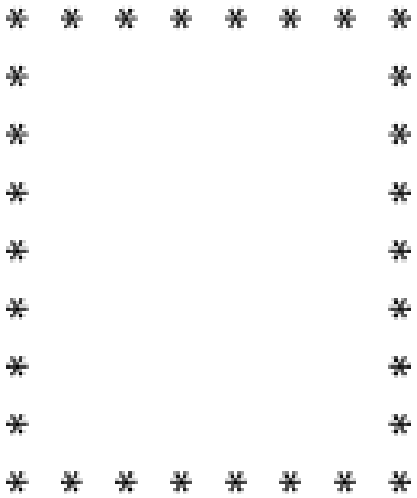


4. Print a multiplication table of 10 consisting of 10 rows

5. Write a program to print the following pattern



6. Write a program to print the following pattern



Pseudocode Examples

1. Find the average of given four numbers
2. Find a profit or loss
3. Print a multiplication table of a given number
4. Calculate factorial of a given number
5. Find the maximum of more than three numbers
6. Exchange the values of two variables
7. Find gcd of two numbers
8. Compute $a^k \bmod n$
9. Check whether the given number is prime or not
10. Locate all the prime numbers between 1 and the given number n
11. Find lcm of two numbers

Next Lecture

Flowcharts