08/02/2023

Day 2

Data Types (premitive, built in) fundamental :-
- Boolean type (bool)
- Character type (char)
- Integer type (int)
- Floting point (float, double)

Derived data type:-
- pointer
- Array
- Reference types

User defined data type :-
- Structure
- Classes
- Enum
- typedef

* Booleans :-
true, false
e.g bool x = true;
Size 1 byte

* Integer Data types -
1, 2, 3 ... 1000
int x = 1000;
Size - 2 byte / 4 byte / 8 byte (depends on OS size)
16 bit OS, 32 bit OS, 64 bit OS

Character -
a, b, c ... z

* Floting point data type :-
e.g 0.8 , 3.9
float x ; size - 4 byte
double x ; size - 8 byte

bool - 1 byte
int - 4 byte
char - 1 byte =>
float - 4 byte =>
double - 8 byte

Qualifiers - Short — half of size of int
long — double than size of int
Unsigned — positive
Signed — , positive or negative

* User defined data type
TypeDef
short unsigned int x
||
typedef short unsigned int ui
↓
ui x, y

typedef float fl ;
fl x, y ;

Enumeration :-
Used to assign names to integral constan
Size is 4 bytes

void - fundamental datatype
Can be used with variable
Used with function and pointer

First program :
Take 2 input and print their sum

```
#include <iostream>
using namespace std;
int main () {
    int a, b;
    cin >> a >>b;
    int ans = a+b;
    cout << ans;

    return 0;
}
```