DATA T -S AND VARIABLE DECLARATIONS

Friday, 1. July 2022 01:17

why data types?

(i) si required to store data
(ii) I nal binary representation of data
(iii) kind of operators

Types of Data types

(i) Primitive
⇓
int
char
float
double
void

(ii) Non primitive

VARIABLE DECLARATIONS

int a, b; [a] [b] 4 byte memory

char m; [m] 1 byte

float k; [k] 4 byte

double d1; [d1] 8 byte

* int is Integer constant
* char is character constant
* float is real constant
* double is real constant

int a, b = 5; a [4] b [5]
a = 4;

char m = 'A'; [A]

float k; [3.5]
k = 3.5

NOTE:- If you don't put or assign in any variables then that variable will take garbage value.

FLOAT V/S DOUBLE

float → 4 bytes
double → 8 bytes

float x = 0.7; x [ ] 4 byte

double y = 0.7; y [0.7] 8 byte

double has more memory to take more binary.

binary of 0.7

0.7 × 2 = 1.4 1
0.4 × 2 = 0.8 0
0.8 × 2 = 1.6 1
0.6 × 2 = 1.2 1
0.2 × 2 = 0.4 0
0.4 × 2 = 0.8 0
0.8 × 2 = 1.6 1

0.1011001100 11 ....

INT V/S CHAR

char m = 65;
char m = 'A';
int n = 65;

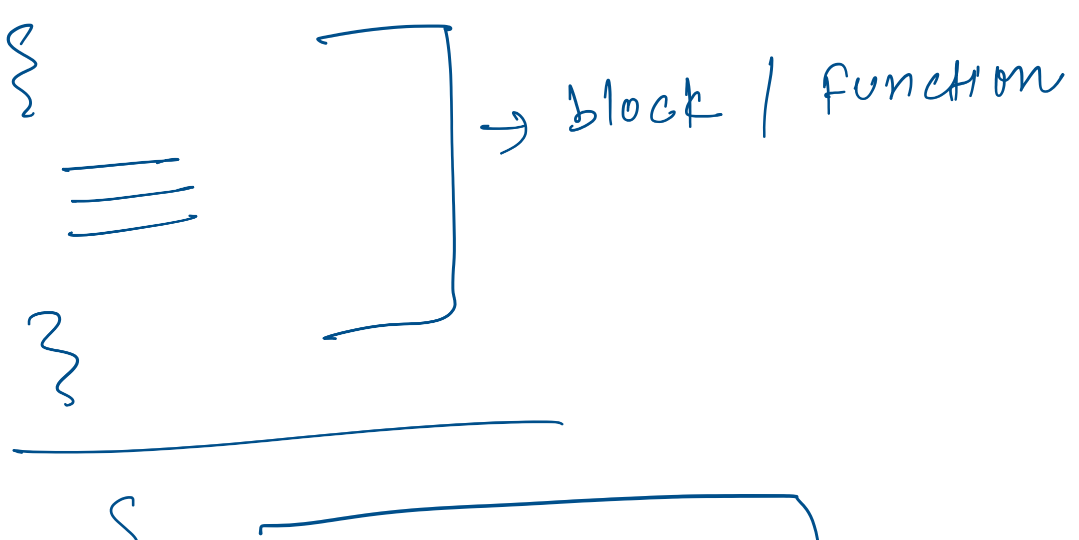
[65] 4 byte   [65] 1 byte

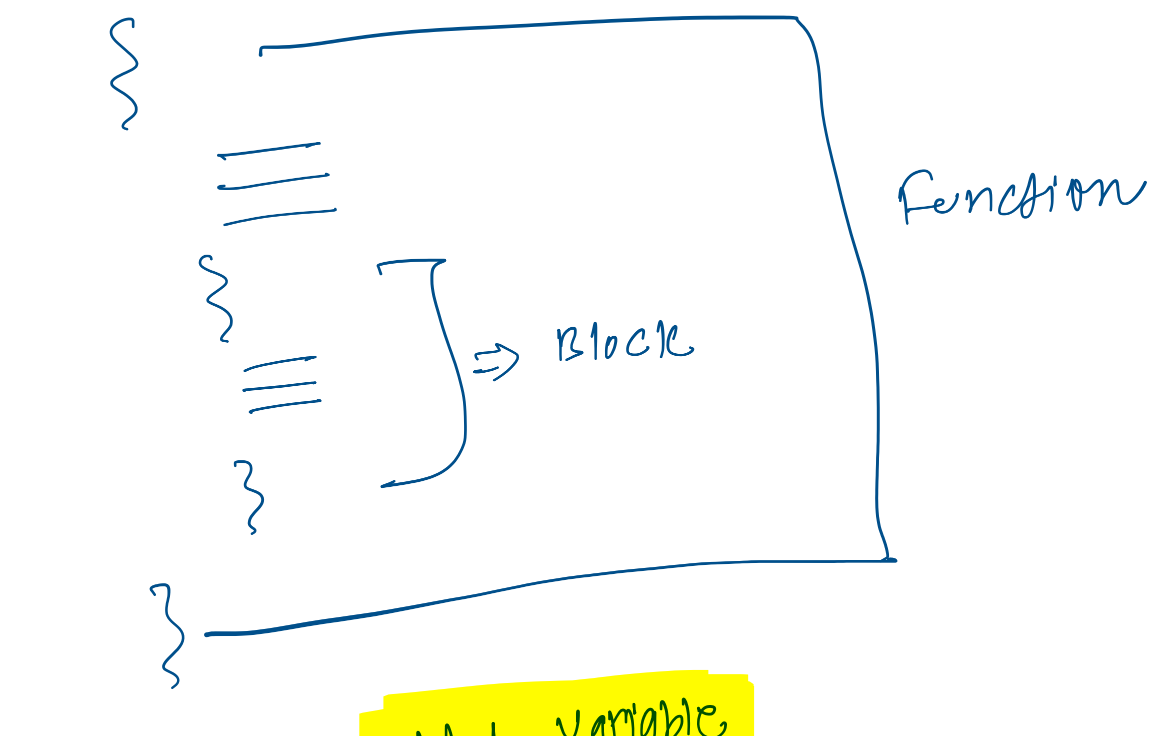
ASCII code of A = 65
total 265 character
@ = 64 , 'A' = 65
' ' = 32 , 'a' = 97

255
[1 1 1 1 1 1 1 1]
1 byte = 8 bits

BLOCK STRUCTURE

- C is a block structured programming language
- A block is group of instruction
- Outer blocks are usually functions
- Function is a block of statements, which has some name for identification.
- A C program can have any numbers of blocks
- Even in smallest C program, there is at least one function
- If there is only one function in the program then its name must be **main()**
- You can write declaration statements outside the function body, but action statement must be written inside the function body.






```
int a, b;  →  global variable
main()
{
  int n;   →  local variable
  ≡
}
```