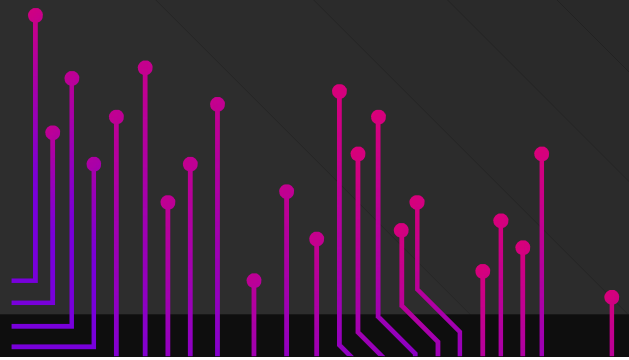
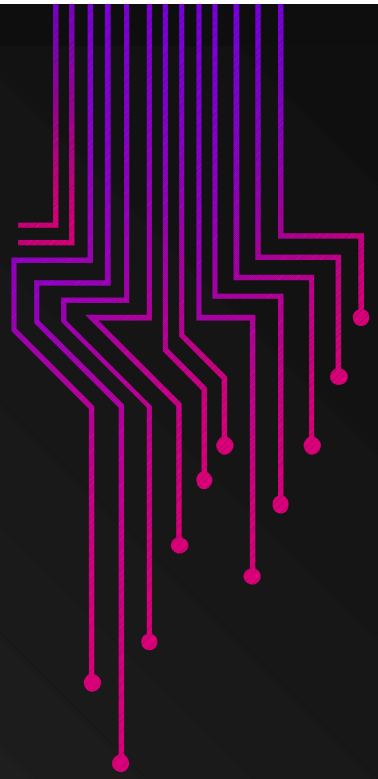
C programing language

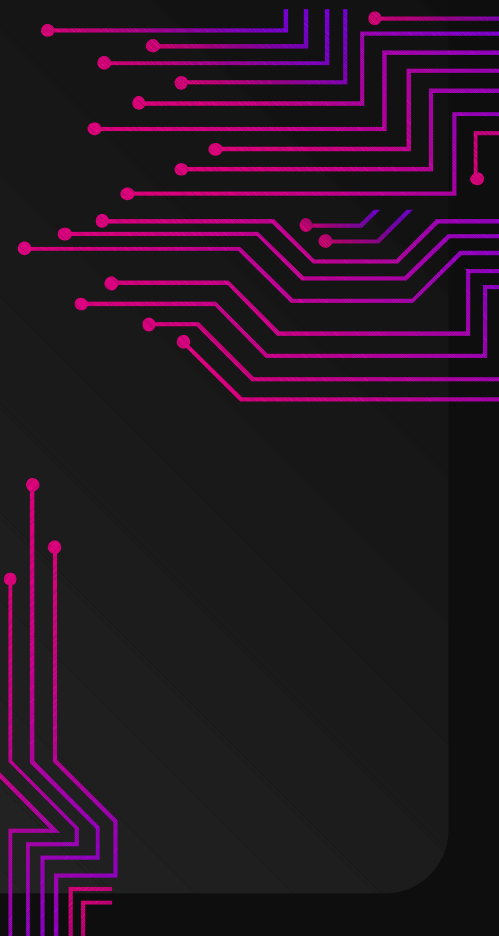
Here is where your presentation begins





Overview of C

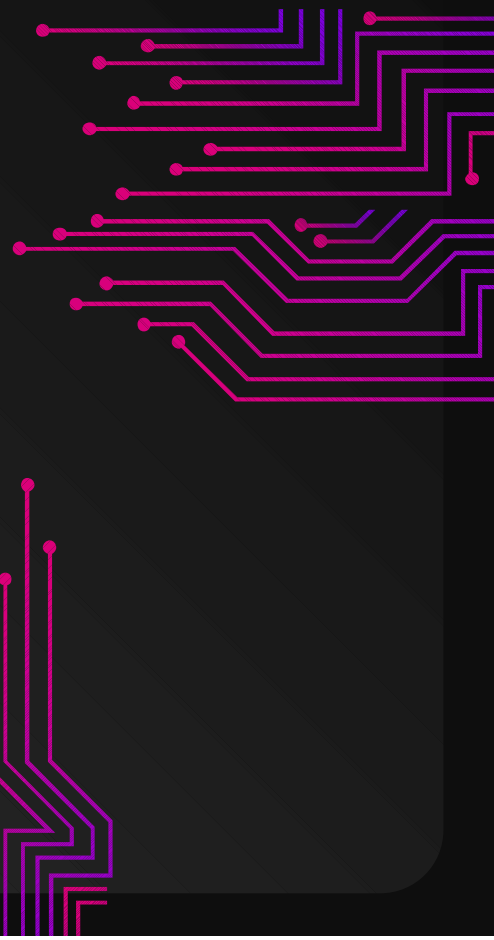
- C is developed by Dennis Ritchie
- Cis a structured programming language
- C supports functions that enables easy maintainability of code, by breaking large file into smaller modules
- Comments in C provides easy readability
- C is a powerful language



Program structure

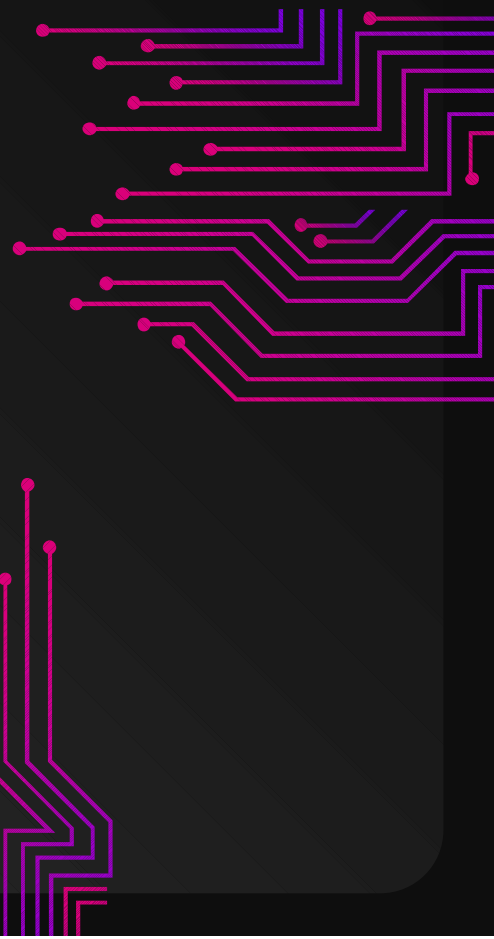
A sample C Program

```
#include<stdio.h>
int main()
{
--other statements
// Comments after double slash
}
```



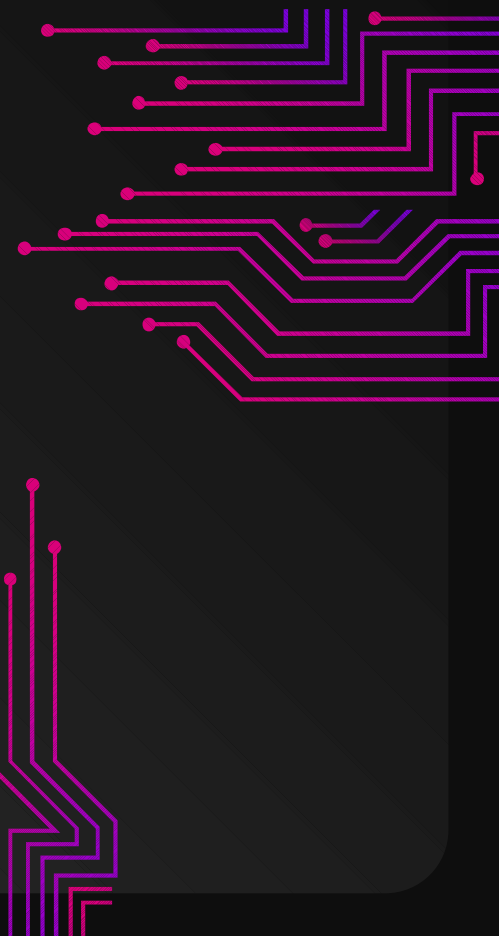
Header files

- The files that are specified in the include section is called as header file
- These are precompiled files that has some functions defined in them
- We can call those functions in our program by supplying parameters
- Header file is given an extension .h
- C Source file is given an extension .c



Main function

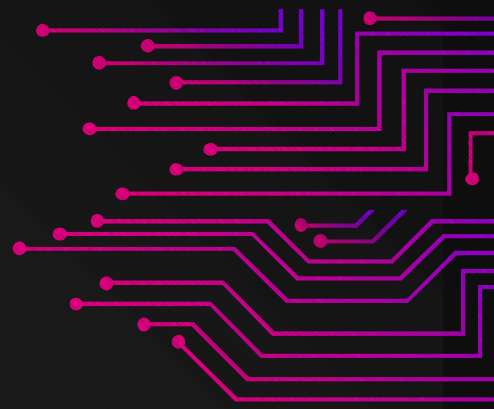
- This is the entry point of a program
- When a file is executed, the start point is the main function
- From main function the flow goes as per the programmers choice.
- There may or may not be other functions written by user in a program
- Main function is compulsory for any c program

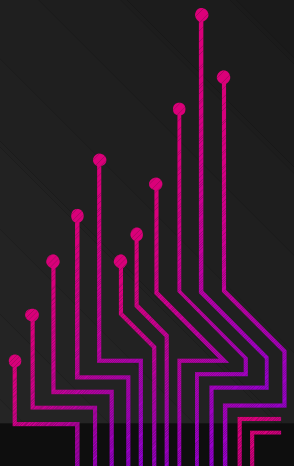


Write the first program

```
#include<stdio.h>
int main()
{
printf("Hello");
return 0;
}
```

This program prints Hello on the screen when we execute it I





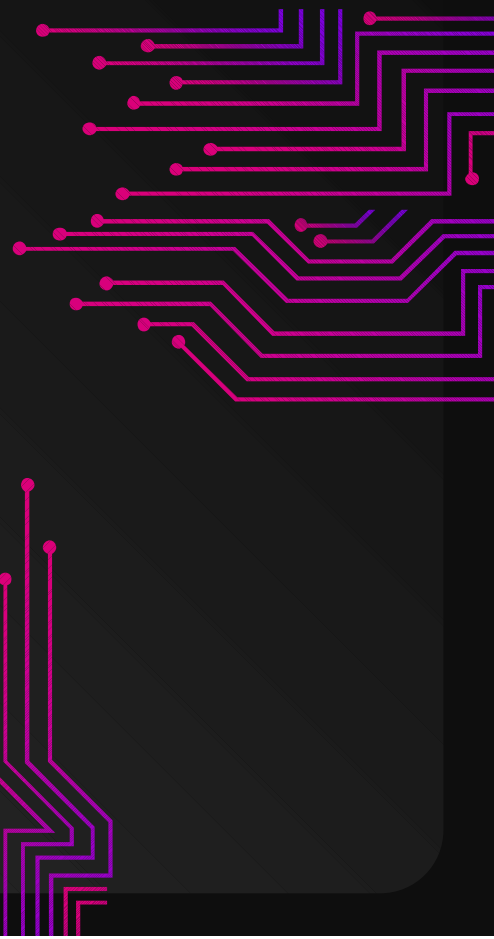
Scanf program

```
#include<stdio.h>
int main()
{
int a;
printf(“Hello”);
scanf(“%d”,&a);
return 0;
}
```

This program prints Hello on the screen when we execute it I

Comments in c

Single line comment
–// (double slash)
– Termination of comment is by pressing enter key
Multi line comment
/*.....
.....*/
This can span over to multiple lines



Data type in c

- Primitive data types

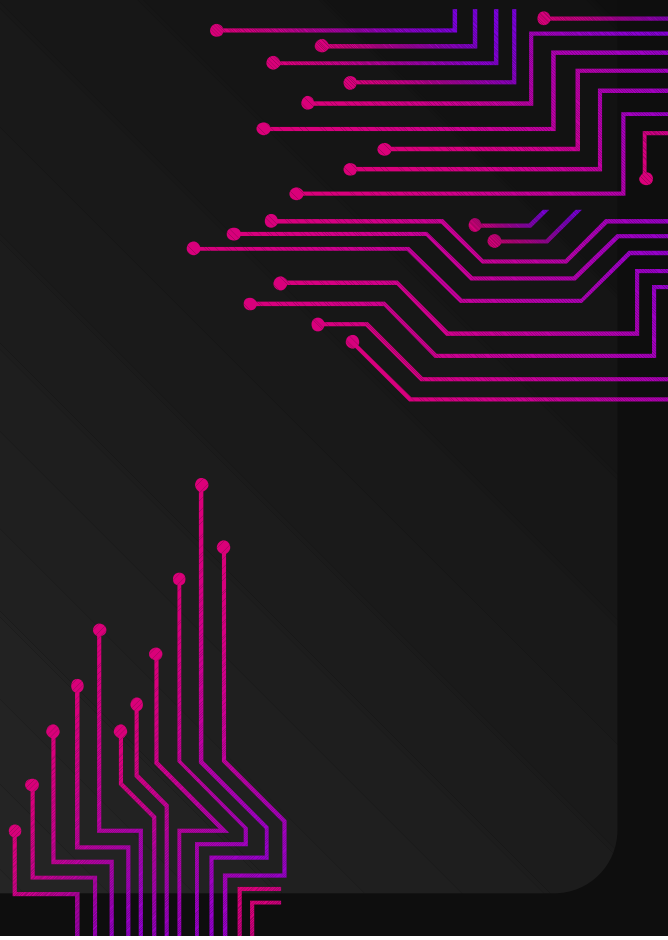
int, float, double, char
Aggregate data types

- Arrays come under this category

Arrays can contain collection of int or float or char or double data 5

- User defined data types

Structures and enum fall under this category.



Variables

- Variables are data that will keep on changing
- Declaration

<<Data type>> <<variable name>>;

Int a;

- Definition

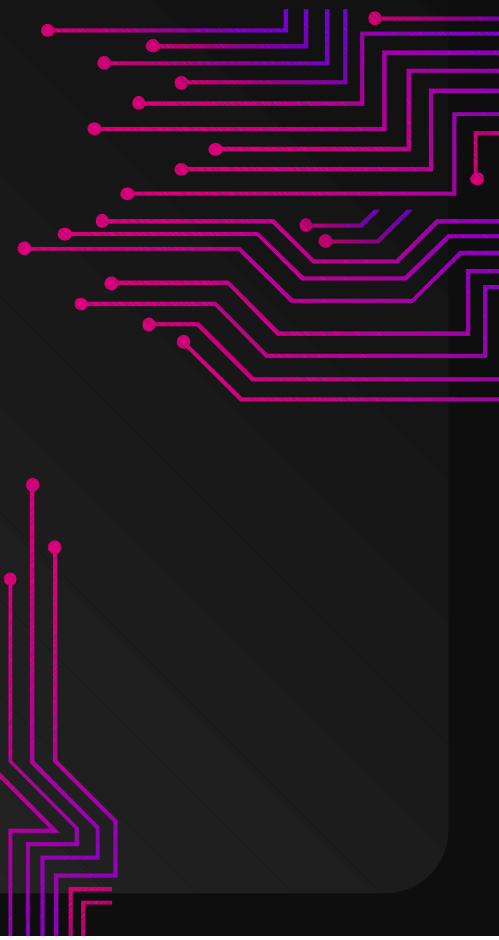
<<varname>>=<<value>>;

a=10; l

- Usage

<<varname>>

a=a+1; //increments the value of a by 1



Operators

- Arithmetic (+,-,*,/,%)
- Relational (<,>,<=,>=,==I=)
- Logical (&&,I,!)
- Bitwise (&)
- Assignment (=)
- Compound assignment(+=,*=,-=,/=,%=,&=,I=)
- Shift (right shift >>, left shift <<)