

Function Pointer

- function pointer is used to store address of function
- function address is address of first instruction of that function
- function name indicates address of that function
- to store address of function, we need pointer of same type
- Function Declaration/prototype/signature

```
<return type> <function name>([List of types of arguments]);
eg int fun(int, int);
    // fun indicates address of function
```

- Function Pointer

```
<return type> (*<pointer name>)([List of types of arguments]);
eg int (*ptr)(int, int);
    // ptr is a pointer '*' of collection '()' of statemets
    // which takes two arguments of type integer '(int, int)'
    // which return integer 'int'
```

- Few examples

```
int fun(int);
int (*ptr)(int);

void fun(int);
void (*ptr)(int);

void fun(int, int);
void (*ptr)(int, int);

void fun(int, char);
void (*ptr)(int, char);

void fun(char, int);
void (*ptr)(char, int);
```