

# ⑤ Introduction to Programming \ Coding

## programming

Procedure oriented

↳ C - system language  
↳ compiled language

C is machine dependent

python : machine independent & interpreter language

Java : Portable, compiled, machine independent

object oriented

↳ python  
↳ java

compiled  
↳ C, C++

java

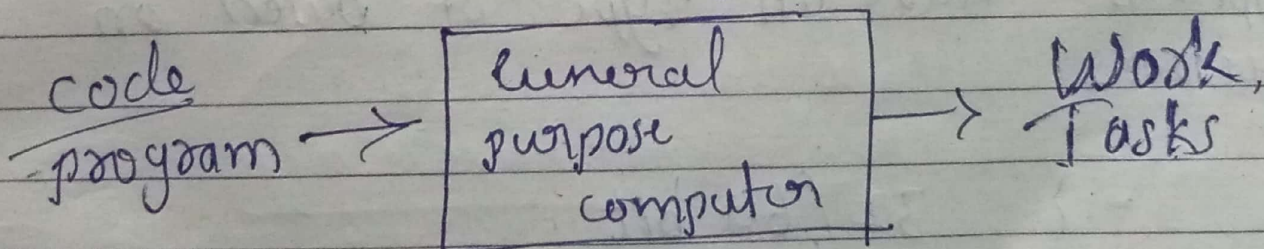
Interpreter  
↳ python

Machine ~~Dependent~~

Machine  
Independent

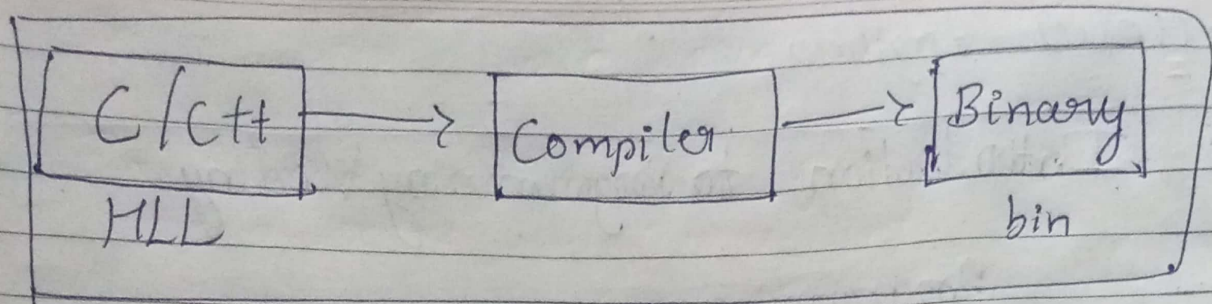
Q.1 What is Programming

⇒ programming is the way or technique to do task or work using through computer

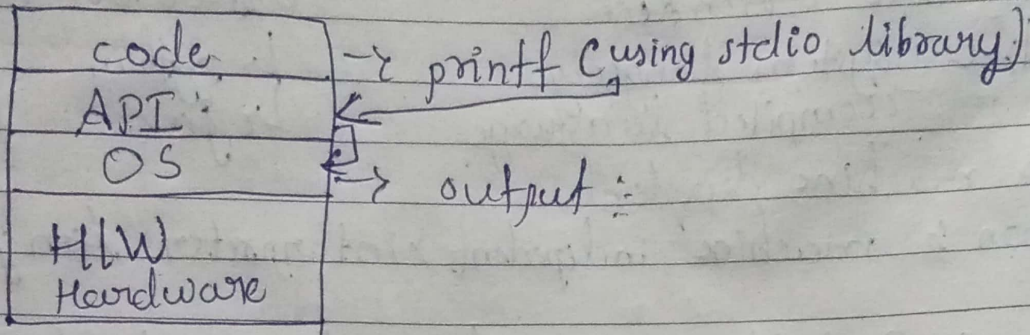




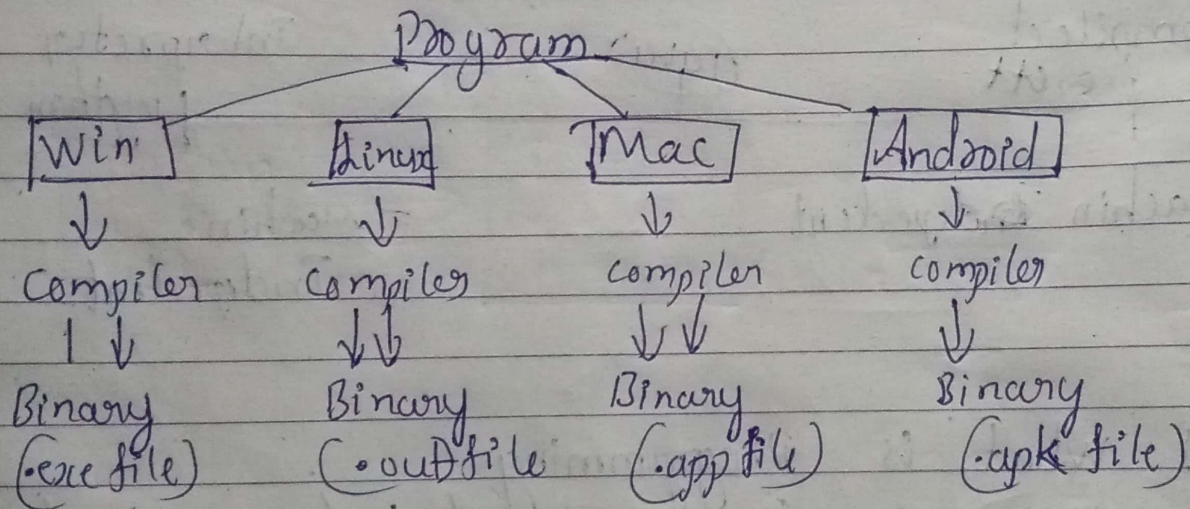
# Highlevel to Binary Conversation



## Compilation Process



Use compiler as preferred for our OS



compilers have on type of based on processors

x86 → 32/64 bit  
ARM → 32/64 bit

platform Dependent

Compiled a file in windows

write a c code to print Hel. Namaste.

```
#include <stdio.h>
```

```
int main() {
```

```
    printf("Namaste\n");
```

```
    return 0;
```

```
}
```

Save it as hello.c, compile it using gcc,

```
gcc hello.c -o hello
```

Now it will store binary in .exe on windows  
run it to execute  $\Rightarrow$  .\hello

compile python file on windows

create hello.py or any name with file extension .py

```
print("Namaste")
```

run it  $\Rightarrow$  python hello.py o/p: Namaste

1 There is difference in how bundling a project to client in C, py, java

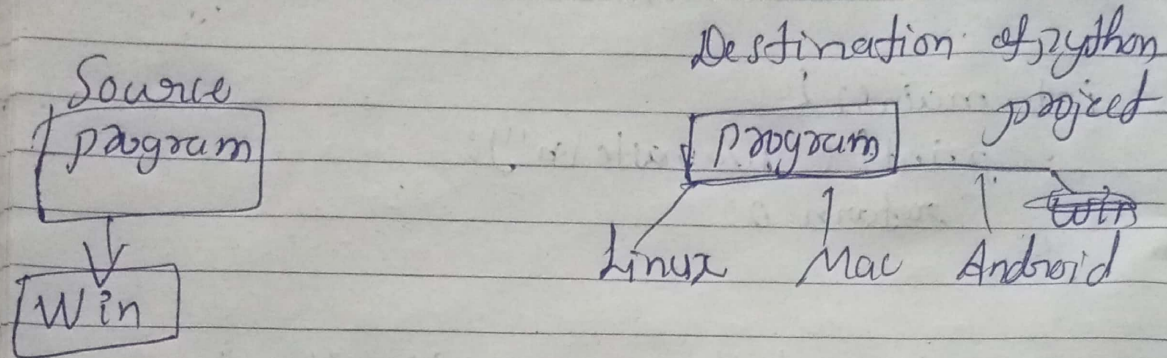
we bundled c file with as .exe extensions and give it to a client.

but in python we bundled and give it to

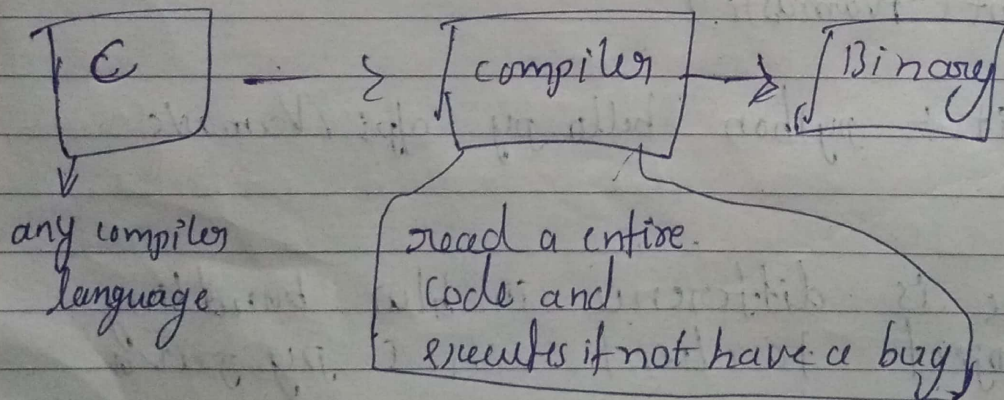
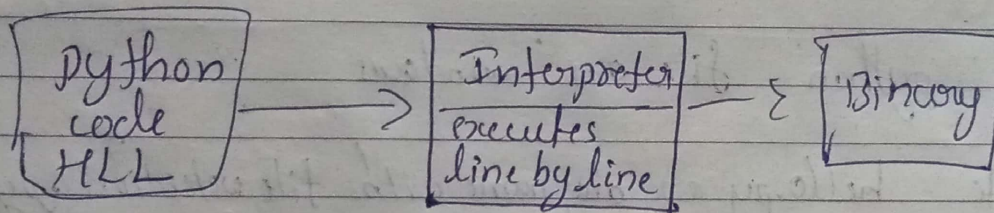


to a client with source code

In Java we can give jar folder  
not a source code to a client



Python have Interpreter to executes a  
.py code



Machine

Dependent source] HLL -> bin	Independent Destination] HLL -> 1010
---------------------------------	---



Machine dependent convert a HLL to binary (1010) when a compiled at source level

Machine independent convert a HLL to binary (100) when a compiled at destination (client handed with source code)

### • Drawbacks of Interpreter language

1) It is very slower than compiled language  
why: It executes line by line

2) we give entire source code to clients if we use it for client side application

3) It take a long memory and storage.

### Java compilation process

