

Statically typing P.L.

int c;      c = 10

memory layout

n = 20  
print (type(n))

<int>

m = 20.2  
<float>

Dynamically  
Typing P.L.

x = True

<bool>

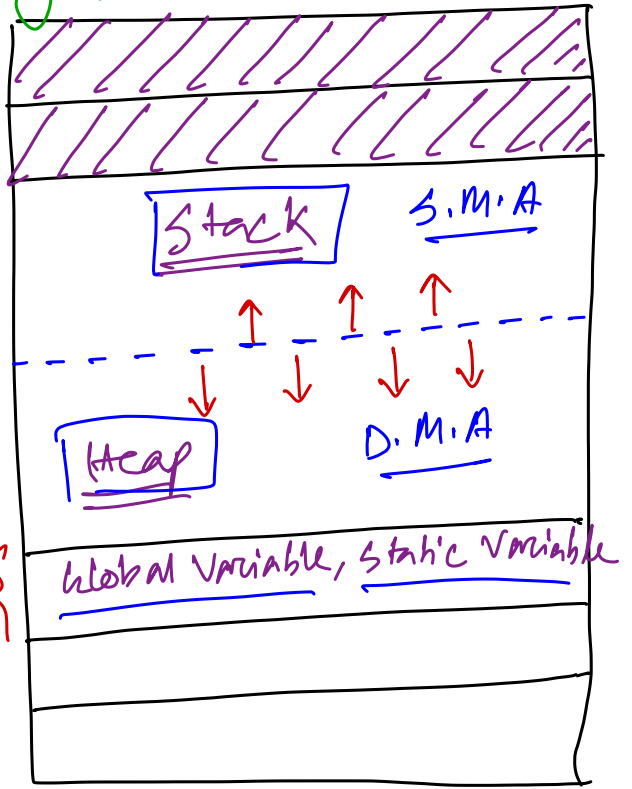
Var (x) = 20

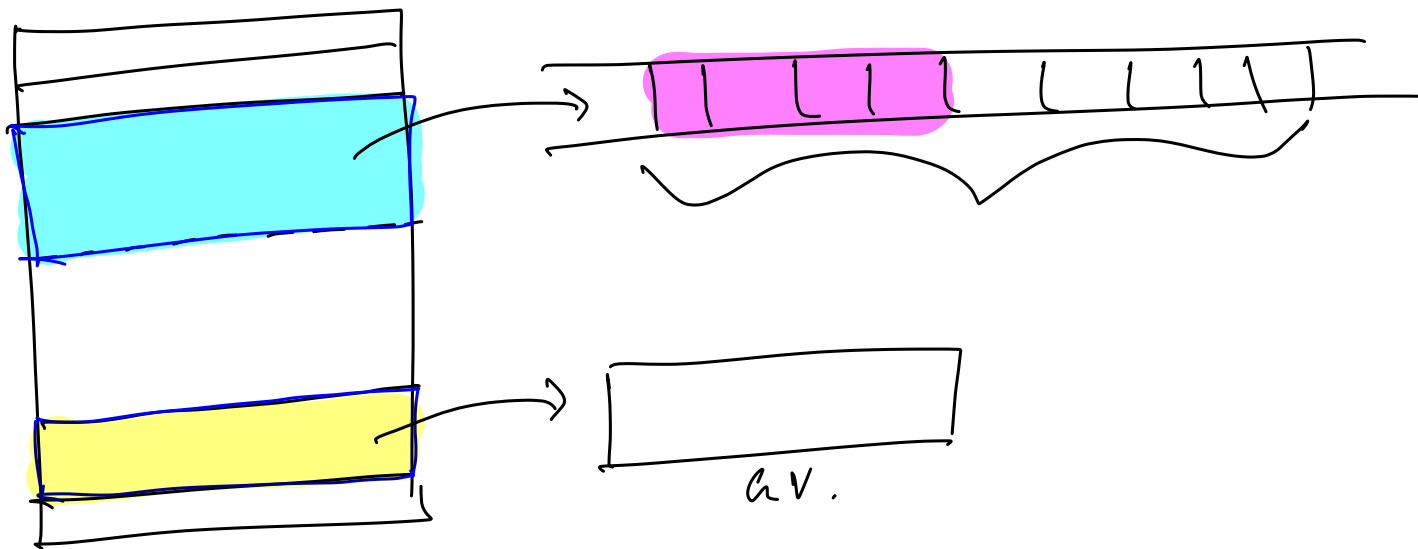
int

Storage classes

auto, extern, static,

Stack  
Heap





```
int a = 10;
int main() {
```

```
    int a = 20;
    printf("%d", a);
    abc();
    return 0;
}
```

```
void abc() {
    printf("%d", a);
}
```

Scoping

Scope / Block

Static Scoping

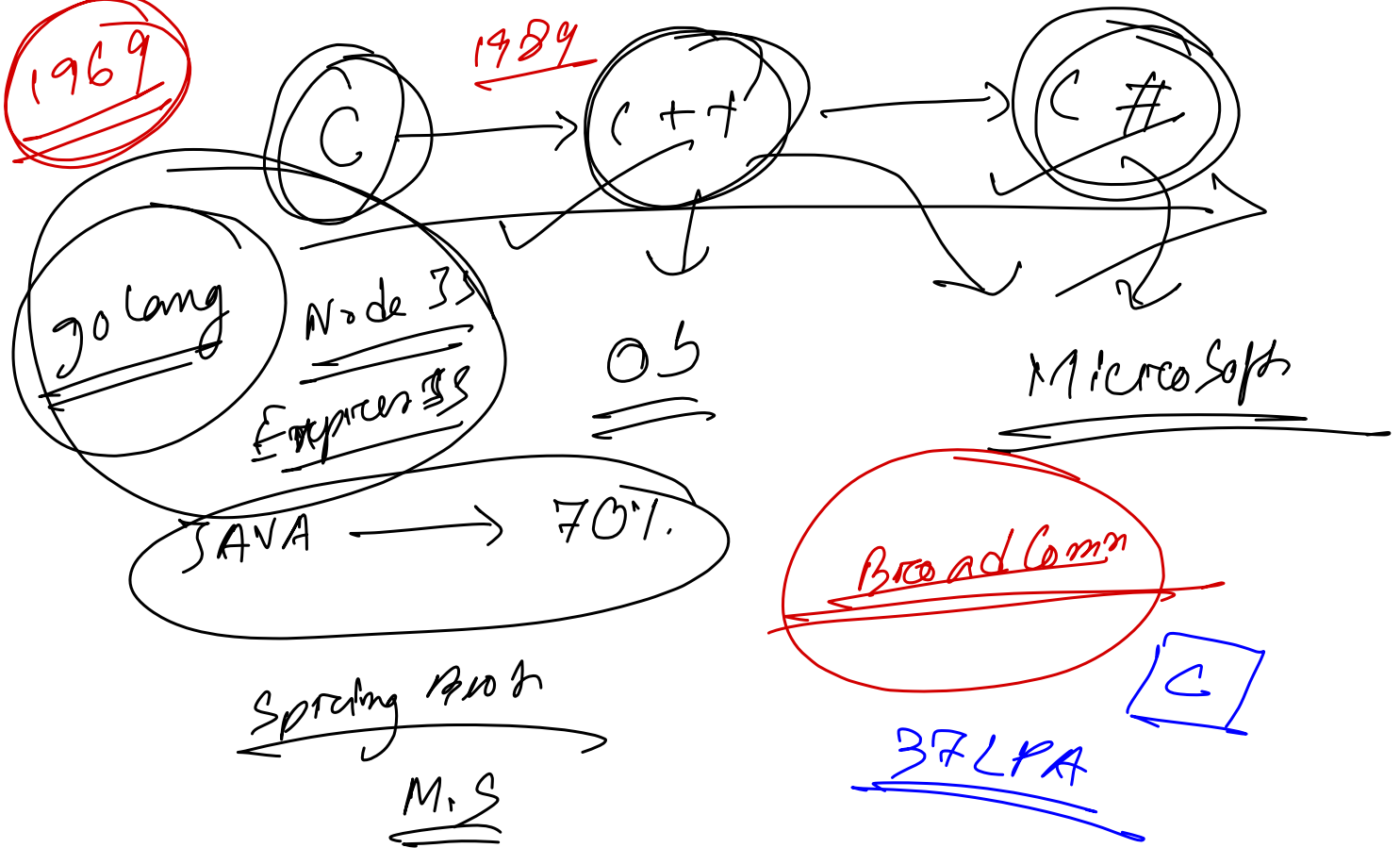
Dynamic "

COBOL  
BASIC

C

C++, Java, Python

OOPS



```

1  #include <stdio.h>
2  // bdw global variables is initialised by 0 by default
3  int a;
4  void func1()
5  {
6      printf("\n*****\n\tInside Func1\n*****\n");
7      printf("a = %d\n", a); // 0
8      a = 20; // global variable a = 20
9  }
10 void func2()
11 {
12     printf("\n*****\n\tInside Func2\n*****\n");
13     printf("a = %d\n", a); // 20
14     int a = 45;
15     printf("Local a = %d\n", a); // 45
16     a *= 2;
17     printf("After modifying a = %d\n", a); // 90
18 }
19 void func3()
20 {
21     int a = 34;
22     printf("\n*****\n\tInside Func3\n*****\n");
23     printf("a = %d\n", a); // 34
24     {
25         extern int a;
26         printf("extern a = %d\n", a); // 20
27     }
28 }
29 int main()
30 {
31     printf("\n*****\n\tInside Main\n*****\n");
32     int a = 10;
33     printf("a = %d\n", a); // 10
34     func1();
35     func2();
36     func3();
37     return 0;
38 }

```

