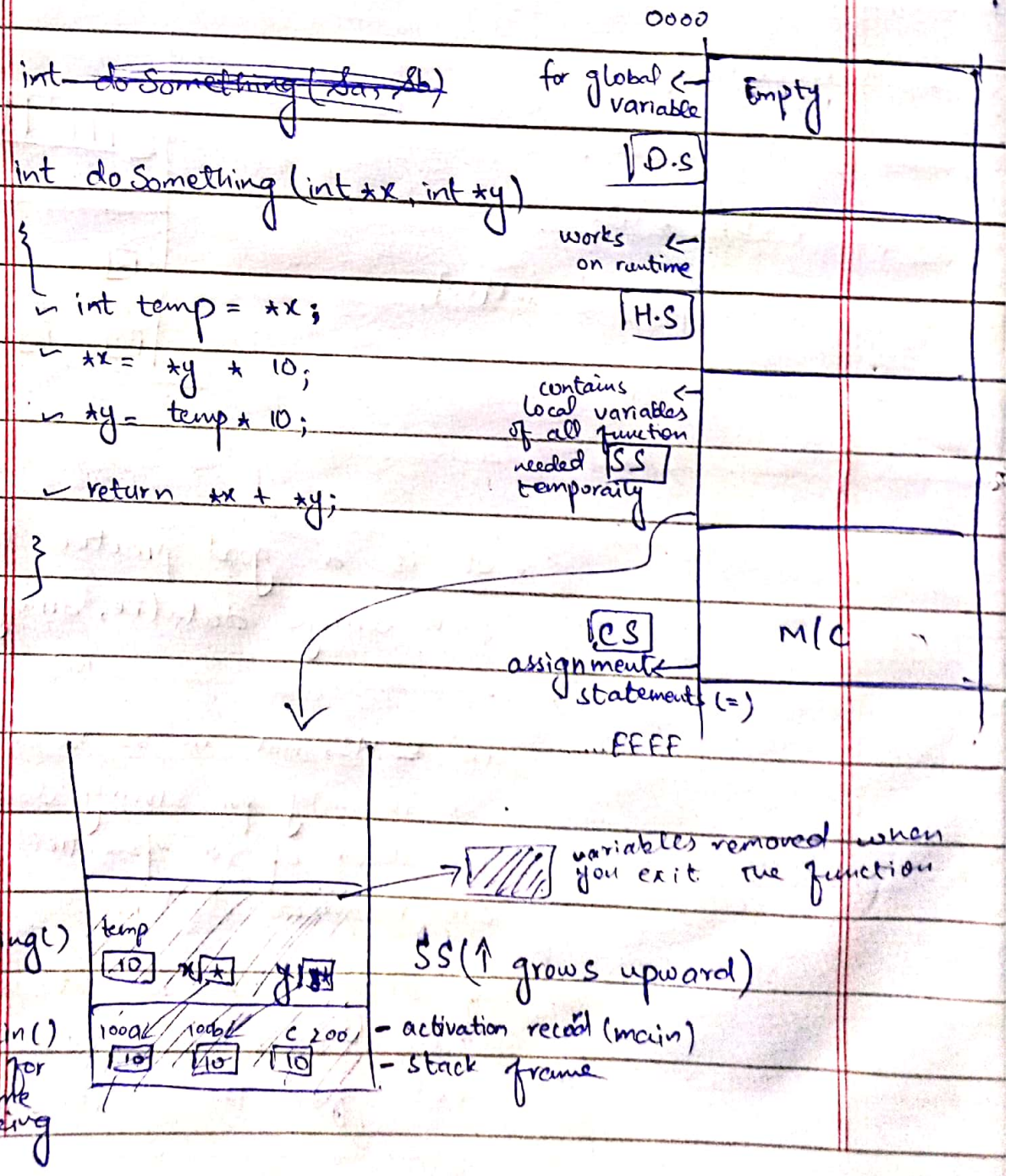
Date: 21-03-22

M T W T F S

Memory Management

```
int main(){
    int a, b, c;
    a=b=c=10;
    c= doSomething(&a, &b)
}

int doSomething(int *x, int *y)
{
    int temp = *x;
    *x = *y * 10;
    *y = temp * 10;
    return *x + *y;
}
```



Date:

- Nesting functions

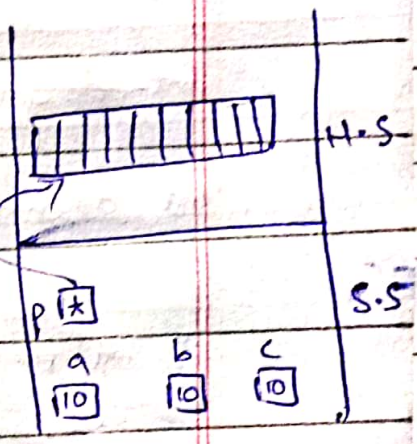
LIFO (last in, first out)

PC → • Address of first instruction stored in PC register before program executes

- stores address of next instruction

- Active function
(function active in SS)

```
int main(){
    int a,b,c;
    a=b=c=10;
    int *p = new int[10];
    return 0;
}
```



- It is a good practice to store such large data (i.e, arrays of 100,.... varaibles) in HS, not in SS because SS is only for storing local variables of a function, which are removed later.

- If array is in SS, it will also be removed when we exit from the function.

Memory Leakage

Date: _____ M T W T F S

```
int main(){
    int a, b, c;
    a = b = c = 10;
    int *z = allocateMemory(10);
}

int *allocateMemory(int n){
    int *p = new int[10];
    return p;
}
```