


Faculty of Electrical, Electronic & Computer Technology	 SAXONY EGYPT UNIVERSITY FOR APPLIED SCIENCE AND TECHNOLOGY
Computer Programming	
ECT 121	
Dr. Amina Elhawary	
Eng. Heba Mohsen	

Sheet 3

1) Problems :

- Given two numbers N and M . Print the **summation** of their **last digits**.

Input
13 12
Output
5

Note

First Example :

last digit in the first number is **3** and **last digit** in the second number is **2**.

So the answer is: ($3 + 2 = 5$)

- Given a number N . Print the **summation** of the numbers that is between **1** and N .

Examples :

Input
3
Output
6

Input
10
Output
55

3. Given two numbers A and B . Print "Yes" if A is **greater than or equal to** B . Otherwise print "No".

Examples :

Input
10 9
Output
Yes

Input
5 7
Output
No

4. Given two numbers A and B . Print "Multiples" if A is **multiple** of B or **vice versa**. Otherwise print "No Multiples".

Examples :

Input
9 3
Output
Multiples

Input
12 5
Output
No Multiples

5. Given 3 numbers A , B and C , Print the **minimum** and the **maximum** numbers.

Examples :

Input
1 2 3
Output
1 3

Input
-1 -2 -3
Output
-3 -1

Input
10 20 -5
Output
-5 20

6. Given two person names.

Each person has {"the first name" + "the second name"}

Determine whether they are brothers or not.

Note: The two persons are brothers if they share the same second name..

Examples :

Input
bassam ramadan ahmed ramadan
Output
ARE Brothers

Input
ali kamel ali salah
Output
NOT

7. Given a letter X. Determine whether X is Digit or Alphabet and if it is Alphabet determine if it is Capital Case or Small Case.

Note:

Digits in ASCII '0' = 48, '1' = 49etc

Capital letters in ASCII 'A' = 65, 'B' = 66etc

Small letters in ASCII 'a' = 97, 'b' = 98etc

Input

Only one line containing a character X which will be a capital or small letter or digit.

Output

Print a single line contains "**IS DIGIT**" if X is **digit** otherwise, print "**ALPHA**" in the first line followed by a new line that contains "**IS CAPITAL**" if X is a **capital** letter and "**IS SMALL**" if X is a **small letter**.

Examples :

Input
A
Output
ALPHA IS CAPITAL

Input
9
Output
IS DIGIT

Input
a
Output
ALPHA IS SMALL

8. Given a number N. Determine whether N is **float number** or **integer number**.

Note:

- If N is **float number** then print "**float**" followed by the **integer** part followed by **decimal** part separated by space.
- If N is **integer number** then print "**int**" followed by the **integer** part separated by space.

Examples :

Input
234.000
Output
int 234

Input
534.958
Output
float 534 0.958

9. Given a letter X. If the letter is lowercase print the letter after converting it from lowercase letter to uppercase letter. Otherwise print the letter after converting it from uppercase letter to lowercase letter

Note : difference between 'a' and 'A' in ASCII is 32 .

Examples :

Input
a
Output
A

Input
A
Output
a

2) Tracing Questions

1. What is The Output of the following Code ?

```
#include<iostream>

using namespace std;

int main() {

    int age = 105;
    if (age < 100)
    {
        cout << "You are pretty young! \n";
    }
    else if (age == 100)
    {
        cout << "You are old\n";
    }
    else
    {
        cout << "You are really old\n";
    }

    return 0;
}
```

2. What is The Output of the following Code?

```
#include<iostream>
using namespace std;
int main() {

    int x = 10, y = 20;
    if (x++ || y++) {
        y += 5;
    }
    else if (x == 10) {
        x -= 5;
    }
    if (y == 20) {
        y = x;
    }
    if (x++ && y++) {
        x += 5;
    }
    cout << x << " " << y << endl;

    return 0;
}
```

3. What is The Output of the following Code?

```
#include<iostream>
using namespace std;
int main() {
    int x = 3;
    if (4 > x > 2) {
        cout << "Well Done";
    }
    else {
        cout << "Right choice";
    }

    return 0;
}
```

4. What is The Output of the following Code?

```
#include <iostream>
using namespace std;
int main() {
    int a;
    a = 5;
    if (++a * 5 <= 25) {
        cout << "Hello";
    }
    else {
        cout << "Bye";
    }

    return 0;
}
```

5. What is The Output of the following Code?

```
#include <iostream>
using namespace std;
int main() {

    cout << true << endl;
    cout << false << endl;
    cout << (true || false) << endl;
    cout << (true && false) << endl;

    return 0;
}
```