Task 1 & 2:

Task01 (string without loop)

Write a program to create variable **firstname** of type string and store your first name ONLY.
Perform following operations:

a) Print string on one line.
b) Print string on one line with spaces.
c) Print each letter of string on new line.
d) $f(x) = \begin{cases} Print\ Wow!,\ firstname starts\ with\ (A\ or\ a)\ and\ ends\ with\ (Z\ or\ z) \\ \\ Print\ Oh!,\ Otherwise \end{cases}$

Task02 (string with loop)

Modify **task01** and do each task with loop. Use **strlen(string)** with char[] or use **size()** or **length()** with string var function to calculate length of string.

Solution:

```
#include<iostream>
using namespace std;
string checker(string name){
	if((name[0]=='A' || name[0]=='a') && (name[7]=='Z' || name[7]=='z')){
		return "Wow!";
	}
	else
	return "Oh!";
}
int main(){
	string firstname = "Muhammad";
                                                        // Task 1
	cout<<"Task 1"<<endl;

	//Part a
	cout<<firstname[0]<<firstname[1]<<firstname[2]<<
		firstname[3]<<firstname[4]<<firstname[5]<<
		firstname[6]<<firstname[7];
	cout<<endl;
	// Part b
	cout<<firstname[0]<<" "<<firstname[1]<<" "<<firstname[2]<<" "<<
		firstname[3]<<" "<<firstname[4]<<" "<<firstname[5]<<" "<<
		firstname[6]<<" "<<firstname[7]<<endl;
	// Part c
	cout<<firstname[0]<<endl;
```

```
	cout<<firstname[1]<<endl;
	cout<<firstname[2]<<endl;
	cout<<firstname[3]<<endl;
	cout<<firstname[4]<<endl;
	cout<<firstname[5]<<endl;
	cout<<firstname[6]<<endl;
	cout<<firstname[7]<<endl;

	// Task d
	string check;
	check = checker(firstname);
	cout<<endl<<check<<endl;


                                                        // Task 2
	cout<<"\n\nTask 2"<<endl;
	// Part a
	for(int i=0;i<firstname.length();i++){
		cout<<firstname[i];
	}
	cout<<endl;
	// Part b
	for(int i=0;i<firstname.length();i++){
		cout<<firstname[i]<<" ";
	}
	cout<<endl;
	// Part c
	for(int i=0;i<firstname.length();i++){
		cout<<firstname[i]<<endl;
	}
	cout<<endl;
cout<<endl;
system("PAUSE");
return 0;
}
```

Output:

```
Task 1
Muhammad
M u h a m m a d
M
u
h
a
m
m
a
d

Oh!


Task 2
Muhammad
M u h a m m a d
M
u
h
a
m
m
a
d
```

Task 3:

Task03 (Substring, Casting)

Design a function as **`void extractInfoAsk(string a)`** user to input string and perform following tasks:

a) Input date (28/10/2019) in string and separate day, month and year in integer type.
b) Input student id (021-12-0006) and tell student's department and enrolled year.
c) Input phone number (0300-1234567) and tell the network, user is using.

Solution:

```
#include<iostream>
#include<string>
using namespace std;
// 28/12/2000
void extract_info_ask(string a, string b, string c){
	string d = a.substr(0,2);
	int day = stoi(d);
	cout<<"\nDay: "<<day<<endl;
	string m = a.substr(3,2);
	int month = stoi(m);
	cout<<"Month: "<<month<<endl;
	string y = a.substr(6,4);
	int year = stoi(y);
	cout<<"Year: "<<year<<endl;

	cout<<endl;

	string depart = b.substr(0,3);
	if(depart== "021"){
		cout<<"Media Department";
	}
	else if(depart== "022"){
		cout<<"Buisness Department";
	}
	else if(depart== "023"){
		cout<<"CS Department";
	}
	else
	cout<<"Wrong CMS entered...";

	int ad_year = stoi(b.substr(4,2));
	cout<<endl<<"Year of Admission: 20" << ad_year<<endl;

	cout<<endl;

	string op = c.substr(0,3);
	if(op == "033"){
```

```
            cout<<"Ufone operator";
      }
      else if(op == "031"){
            cout<<"Jazz operator";
      }
      else if(op =="034"){
            cout<<"Zong operator";
      }
      else
      cout<<"Wrong number entered...";
}
int main(){
      // Part a
      string date;
      cout<<"Enter Date (dd/mm/yyyy): ";
      cin>>date;

      // Part b
      string id;
      cout<<"Enter your CMS id (000-00-0000): ";
      cin>>id;

      // Part c
      string phone;
      cout<<"Enter your phone number (0000-0000000): ";
      cin>>phone;
      extract_info_ask(date,id,phone);

return 0;
}
```

Output:

```
Enter Date (dd/mm/yyyy): 21/03/2013
Enter your CMS id (000-00-0000): 023-25-0161
Enter your phone number (0000-0000000): 0334-7544444444

Day: 21
Month: 3
Year: 2013

CS Department
Year of Admission: 2025

Ufone operator
--------------------------------
Process exited after 35.38 seconds with return value 0
Press any key to continue . . .
```

Task 4:

Task04 (Concatenation)

Ask user two inputs **firstname** and **lastname** and perform following tasks:

a) Concatenate both names and print on screen separated by space.
b) Concatenate both names spaces, separated by "-".
c) Make any professional email (domain name: siba.edu.pk) from **firstname** and **lastname**.

Solution:

```
#include<iostream>
#include<cstring>
using namespace std;
int main(){
      string firstname, lastname, fullname, email;
      cout<<"Enter your first name: ";
      cin>>firstname;
      cout<<"Enter your last name: ";
      cin>>lastname;

      fullname = firstname + lastname;

      for(int i = 0; i<fullname.length();i++){
            cout<<fullname[i]<<" ";}
      cout<<endl;
      for(int i = 0; i<fullname.length();i++){
            cout<<fullname[i];
            if(i==fullname.length()-1) break;

            cout<<"-";}
      cout<<endl;
      email = fullname + "@suk-iba.edu.pk";
      cout<<"Email Adress: "<< email;
return 0;
}
```

Output:

```
Enter your first name: kamran
Enter your last name: Gul
k a m r a n G u l
k-a-m-r-a-n-G-u-l
Email Adress: kamranGul@suk-iba.edu.pk
```

Task 5:

Task05 (Comparison)

Write a function to check whether two words are similar or not. Use **strcmp** function.

Solution:

```
#include<iostream>
using namespace std;
void comparison(char a[20], char b[20]){
      if(strcmp(a,b) == 0)
      cout<<"Strings are equal";
      else
      cout<<"Strings are not equal";
}
int main(){
      char first[20], second[20];
      cout<<"Enter first string: ";
      cin>>first;
      cout<<"Enter second string: ";
      cin>>second;
      comparison(first,second);

return 0;
}
```

Output:

```
Enter first string: muhammad
Enter second string: muhammad
Strings are equal
--------------------------------
Process exited after 6.784 seconds with return value 0
Press any key to continue . . .
```