

**CS-114 – Fundamental of Programing**

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**LAB MANUAL #3**

**HOME TASK**

**ME 15 Section B**

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## Task 1

Code :

```
#include<iostream>
using namespace std;
int main()
{
    char a;
    cout<<"Choose the province. Type\n p for Punjab\n k fpr KPK\n s for Sindh\n b for
balochistan"<<endl;
    cin>>a;
    switch(a)
    {
        case 'p':cout<<"The population of Punjab is 127,474,000 "<<endl;
        break;
        case 'k':cout<<"The population of KPK is 40.8 million. "<<endl;
        break;
        case 's':cout<<"The population of Sindh is 54,858,515 "<<endl;
        break;
        case 'b':cout<<"The population of Balochostan is 21.7 million."<<endl;
        break;
        default:cout<<"enter a valid character.";
        break;
    }
    return 0;
}
```

Output screen:

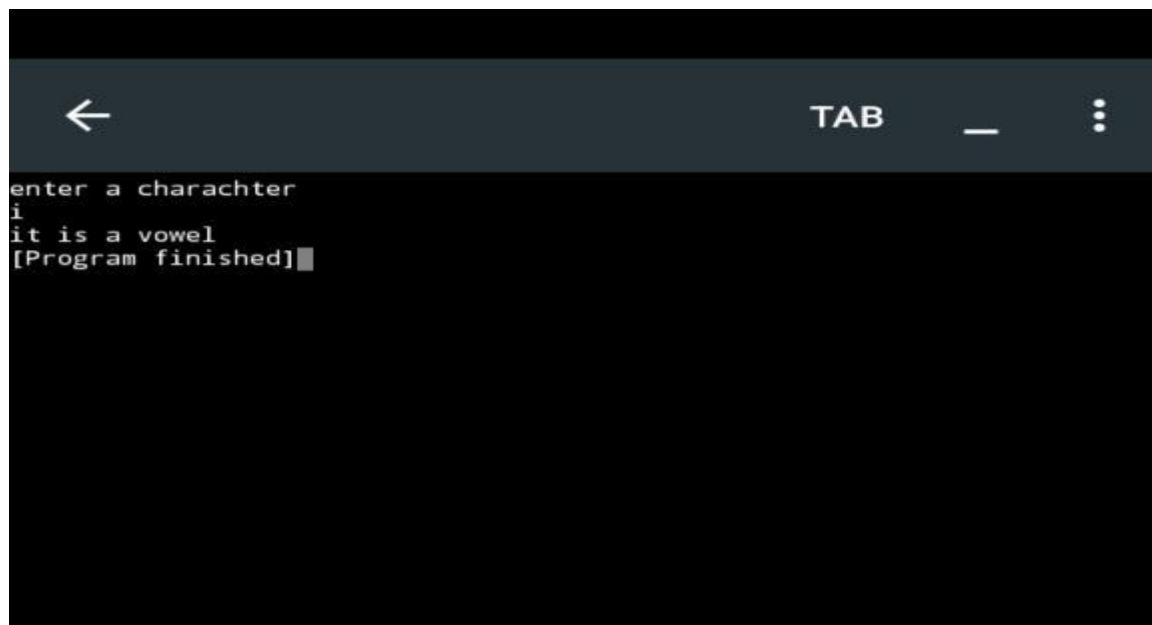
A screenshot of a terminal window with a dark background. At the top, there is a navigation bar with a back arrow on the left, the word 'TAB' in the center, and a horizontal line and three vertical dots on the right. The terminal text shows the program's prompt: 'Choose the province. Type' followed by a list of options: 'p for Punjab', 'k fpr KPK', 's for Sindh', and 'b for balochistan'. The user has entered 'k', and the program has responded with 'The population of KPK is 40.8 million.'. The terminal ends with '[Program finished]' followed by a cursor block.

```
Choose the province. Type
p for Punjab
k fpr KPK
s for Sindh
b for balochistan
k
The population of KPK is 40.8 million.
[Program finished]
```

## Task 2:

```
#include<iostream>
using namespace std;
int main()
{
    char a;
    cout<<"enter a charachter"<<endl;
    cin>>a;
    switch (a)
    {
        case 'a': case 'e': case 'i': case 'o': case 'u': cout<<"it is a vowel";
        break;
        default: cout<<"it is a consonant";
        break;
    }
    return 0;
}
```

Output screen:

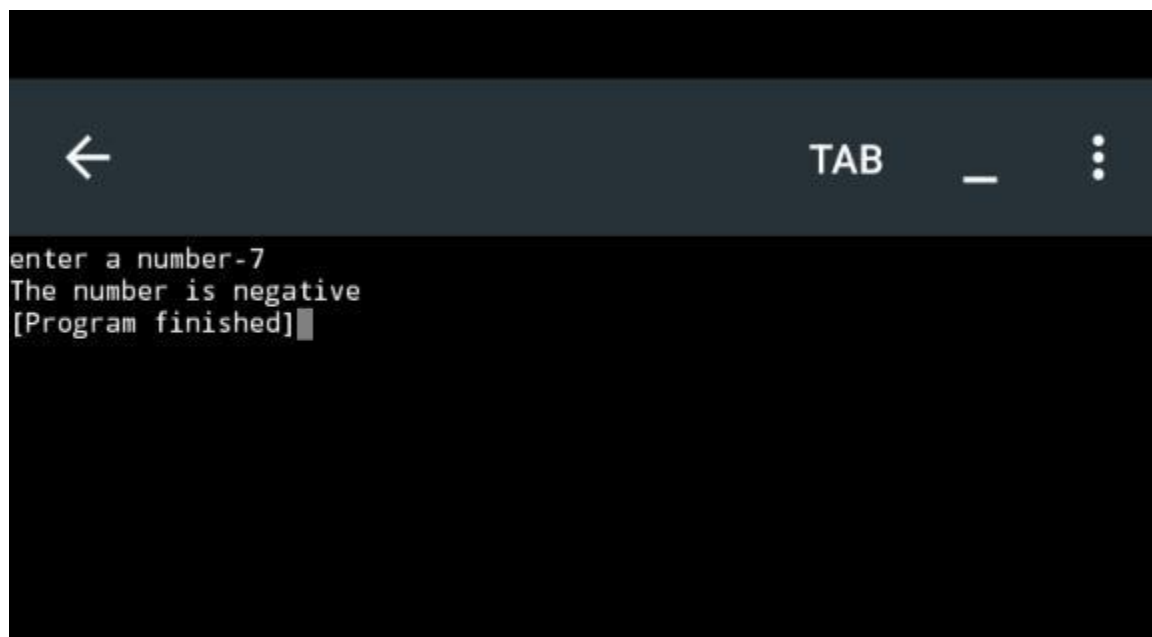
A screenshot of a terminal window with a dark background. The window has a title bar with a back arrow, the text 'TAB', and a vertical ellipsis. The terminal content shows the program's execution: the prompt 'enter a charachter' is followed by the user input 'i'. The program then outputs 'it is a vowel' and ends with '[Program finished]' and a cursor.

```
enter a charachter
i
it is a vowel
[Program finished]
```

### Task 3:

```
Code: #include<iostream>
using namespace std;
int main()
{
    int a;
    cout<<"enter a number";
    cin>>a;
    switch(a>0)
    {
        case 1:cout<<"The number is positive";
        break;
        case 0:
        switch (a<0)
        {case 1: cout<<"The number is negative";
        break;
        case 0: cout<<"The number is zero";
        break; }
        break;
    }
    return 0;
}
```

Output screen:

A screenshot of a terminal window with a dark background. The window has a title bar with a back arrow, the text 'TAB', and a horizontal line. The terminal output shows the prompt 'enter a number-' followed by the input '-7'. The program then outputs 'The number is negative' and '[Program finished]' with a cursor at the end.

```
enter a number-7
The number is negative
[Program finished]
```

Task 4:

Code:

```
#include<iostream>
using namespace std;
int main()
{
    int age;
    cout<<"Enter the person's age"<<endl;
    cin>>age;
    if(age>19)
        cout<<"the person is an adult";
    else
    {if (age<13)
        cout<<"The person is a child";
        else
        cout<<"The person is a teenager";
    }
    return 0;
}
```

Output screen

A screenshot of a terminal window with a dark background. The window has a title bar with a back arrow, the text 'TAB', and a vertical ellipsis. The terminal content shows the program's execution: it prompts 'Enter the person's age', the user enters '13', and the program outputs 'The person is a teenager'. The prompt '[Program finished]' is shown at the end of the line.

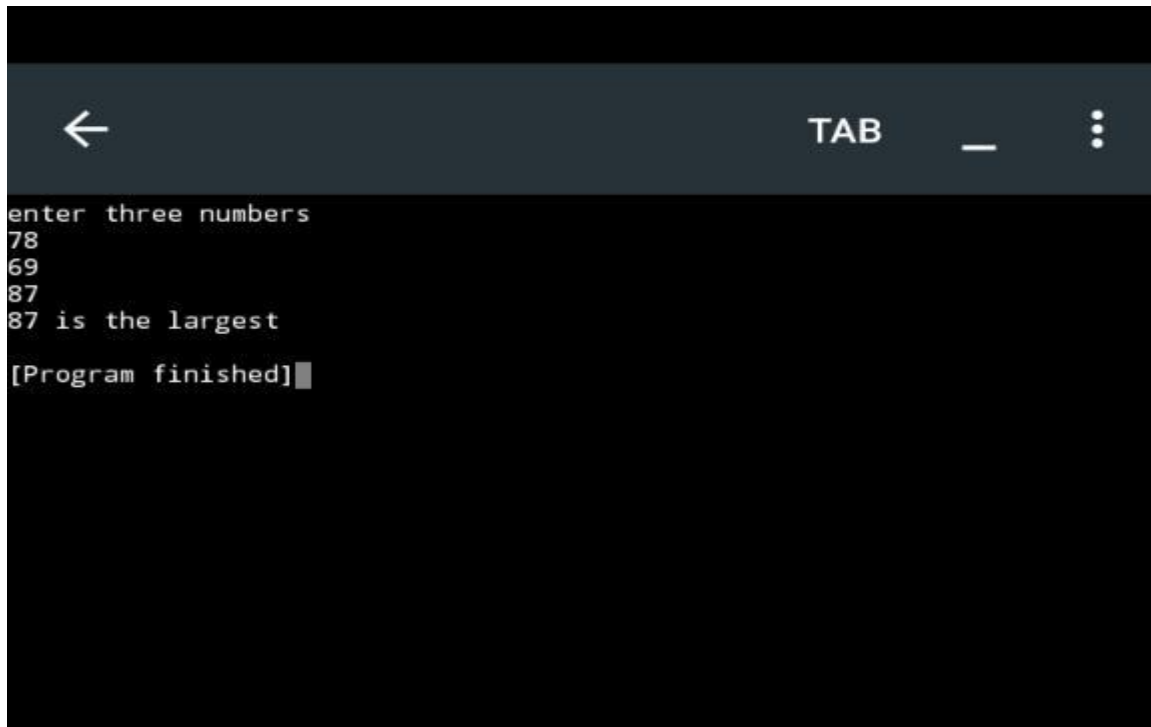
```
Enter the person's age
13
The person is a teenager
[Program finished]
```

Task 5:

Code:

```
#include<iostream>
using namespace std;
int main()
{
    int a, b, c;
    cout<<"enter three numbers"<<endl;
    cin>>a>>b>>c;
    if(a>b)
    {if (a>c)
    cout<<a<<" is the largest"<<endl;
    else
    cout<<c<<" is the largest"<<endl;
    }
    else
    {if(b>c)
    cout<<b<<" is the largest";
    else
    cout<<c<<" is the largest";
    }
    return 0;
}
```

Output screen :

A screenshot of a terminal window with a dark background. The window has a title bar with a back arrow, the text 'TAB', and a vertical ellipsis. The terminal content shows the program's execution: it prompts 'enter three numbers', receives three inputs (78, 69, 87) on separate lines, and then outputs '87 is the largest'. The session ends with '[Program finished]' followed by a cursor.

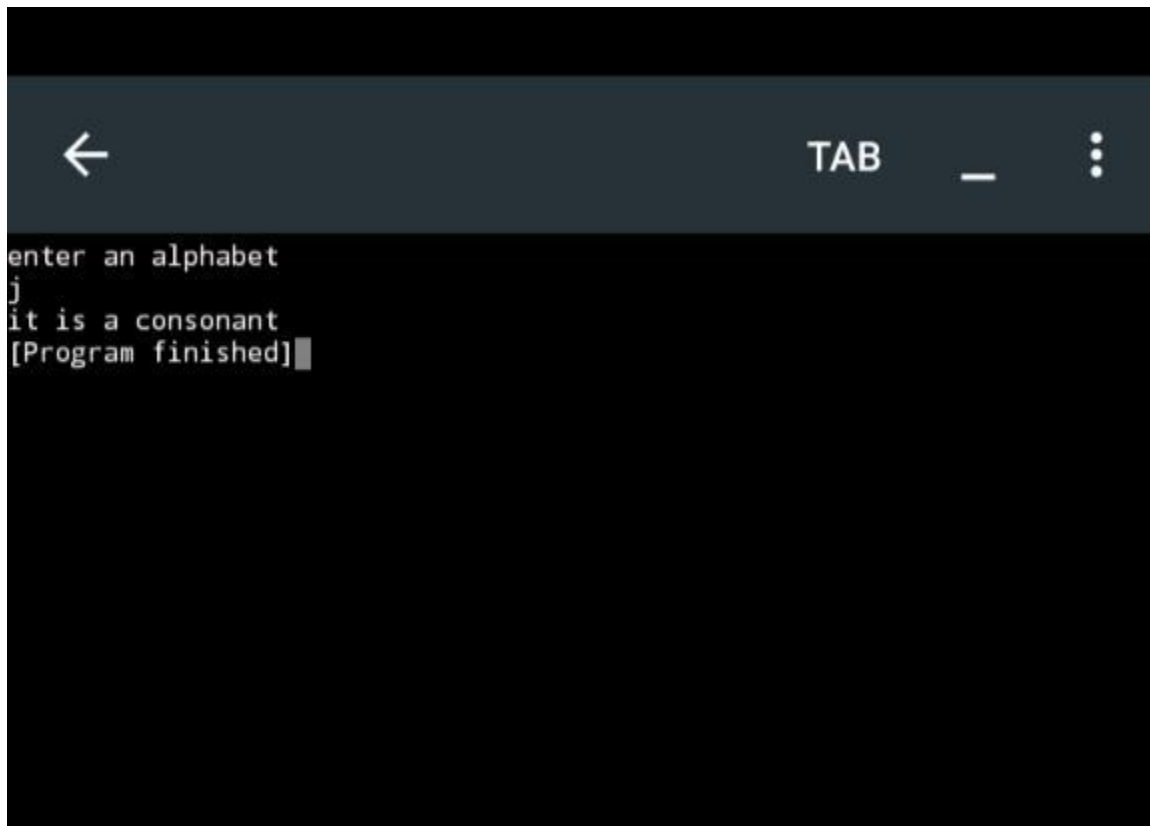
```
enter three numbers
78
69
87
87 is the largest
[Program finished]
```

Task 6:

Code:

```
#include<iostream>
using namespace std;
int main()
{
    char a;
    cout<<"enter an alphabet"<<endl;
    cin>>a;
    if(a=='a' || a=='e' || a=='i' || a=='o' || a=='u')
        cout<<"the entered alphabet is a vowel";
    else
        cout<<"it is a consonant";
    return 0;
}
```

Output screen

A screenshot of a terminal window with a dark background. The window has a title bar with a back arrow, the text 'TAB', an underline, and a vertical ellipsis. The terminal output shows the program's execution: it prompts 'enter an alphabet', receives the input 'j', and outputs 'it is a consonant'. The prompt '[Program finished]' is shown at the end of the output line.

```
enter an alphabet
j
it is a consonant
[Program finished]
```