



NATIONAL UNIVERSITY OF SCIENCES & TECNOLOGY
SCHOOL OF MECHANICAL AND MANUFACTURING ENGINEERING

SEMESTER # 01
CLASS: - ME 15 [SEC A]

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HOME TASK No. 03

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QUESTION No.01

```
// _____  
/*Write a C++ program to print the total number of populations in Punjab, Sindh, KPK, and  
Balochistan using a switch case.
```

```
*/
```

```
#include<iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    cout<<"QUESTION No.01"<<endl;
```

```
    char province;
```

```
    cout<<"enter first letter of concerned province ";
```

```
    cin>>province;
```

```
    switch(province) {
```

```
        case 'p':
```

```
            cout<<"the population of punjab is 110 Million";
```

```
            break;
```

```
        case 'b':
```

```
            cout<<"the population of balochistan is 20,094,659 ";
```

```
            break;
```

```
        case 'k':
```

```
            cout<<"the population of kpk is 39,372,462 ";
```

```
            break;
```

```
        case 's':
```

```
            cout<<"the population of sindh is 54,858,515 ";
```

```
            break;        }    }
```

Write a C++ program to print the total number of populations in Punjab, Sindh, KPK, and Balochistan using a switch case.

```

#include<iostream>
using namespace std;
int main()
{
    cout<<"QUESTION No.01"<<endl;
    char province;
    cout<<"enter first letter of concerned province ";
    cin>>province;
    switch(province) {
        case 'p':
            cout<<"the population of punjab is 110 Million";
            break;
        case 'b':
            cout<<"the population of balochistan is 20,094,659 ";
            break;
        case 'k':
            cout<<"the population of kpk is 39,372,462 ";
            break;
        case 's':
            cout<<"the population of sindh is 54,858,515 ";
            break;
    }
    return 0;
}

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.01.exe
QUESTION No.01
enter first letter of concerned province s
the population of sindh is 54,858,515
-----
Process exited after 1.518 seconds with return value 0
Press any key to continue . . .

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.01.exe
QUESTION No.01
enter first letter of concerned province k
the population of kpk is 39,372,462
-----
Process exited after 0.8337 seconds with return value 0
Press any key to continue . . .

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.01.exe
QUESTION No.01
enter first letter of concerned province p
the population of punjab is 110 Million
-----
Process exited after 1.311 seconds with return value 0
Press any key to continue . . .

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.01.exe
QUESTION No.01
enter first letter of concerned province b
the population of balochistan is 20,094,659
-----
Process exited after 0.9302 seconds with return value 0
Press any key to continue . . .

```

QUESTION No.02

// _____

/*Write a C++ program to check whether an alphabet is a vowel or consonant using a switch case

*/

#include<iostream>

using namespace std;

int main ()

{

 char character;

 cout<<"enter character ";

 cin>>character;

 switch (character){

 case 'a': case 'e' :case 'i':case 'o':case 'u':case 'A':case 'E' :case 'I':case 'O':case 'U':

 cout<<"the entered character is vowel"<<endl;

 break;

 default:

 cout<<"the entered character is consonant"<<endl;

 }

}

Write a C++ program to check whether an alphabet is a vowel or consonant using a switch case

```

//
/*Write a C++ program to check whether an alphabet is a vowel or consonant using a switch case
*/
#include<iostream>
using namespace std;
int main ()
{
    char character;
    cout<<"enter character ";
    cin>>character;
    switch (character){
        case 'a': case'e' :case 'i':case'o':case'u':case 'A':case'E' :case 'I':case'O':case'U':
            cout<<"the entered character is vowel"<<endl;
            break;
        default:
            cout<<"the entered character is consonant"<<endl;
    }
}

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.02 ...exe
enter character A
the entered character is vowel

-----
Process exited after 2.064 seconds with return value 0
Press any key to continue . . .

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.02 ...exe
enter character a
the entered character is vowel

-----
Process exited after 0.5891 seconds with return value 0
Press any key to continue . . .

```

QUESTION No.03

// _____
/*Write a C++ program to check whether a number is positive, negative, or zero using a switch

case.

*/

#include <iostream>

using namespace std;

int main(){cout<<"QUESTION No.03"<<endl;

int x;

cout << "Please enter a value of x: ";

cin >> x;

if(x>0) {x=1;}

else if(x<0){x=-1;}

switch (x){

case 1:

cout << "x is positive";

break;

case 0:

cout << "x is 0";

break;

case -1:

cout << "x is Negative";

break; }}

Write a C++ program to check whether a number is positive, negative, or zero using a switch

```

#include <iostream>
using namespace std;

int main(){cout<<"QUESTION No.03"<<endl;

    int x;
    cout << "Please enter a value of x: ";
    cin >> x;
    if(x>0) {x=1;}

    else if(x<0){x=-1;}

    switch (x)
    {
        case 1:
            cout << "x is positive";
            break;
        case 0:
            cout << "x is 0";
            break;
        case -1:
            cout << "x is Negative";
            break;
    }

    return 0;
}

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.03.exe
QUESTION No.03
Please enter a value of x: 67
x is positive
-----
Process exited after 1.302 seconds with return value 0
Press any key to continue . . .

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.03.exe
QUESTION No.03
Please enter a value of x: 0
x is 0
-----
Process exited after 1.038 seconds with return value 0
Press any key to continue . . .

```

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.03.exe
QUESTION No.03
Please enter a value of x: -23
x is Negative
-----
Process exited after 0.9418 seconds with return value 0
Press any key to continue . . .

```

QUESTION No.04

```
// _____  
/*Write a C++ to find out whether a person is an adult, teenager, or child using nested if-else  
*/  
#include<iostream>  
using namespace std;  
int main()  
{  
    cout<<"Question No.04 "<<endl;  
    int age; //declaraing age of person  
    cout<<"enter age of person ";  
    cin>>age;//taking input from user  
    if (age>=0&&age<12) //for child  
    {cout<<"the person is child"<<endl;  
    }  
    else{  
        if(age>=12&&age<=19) //for a teenager  
        {    cout<<"the person is teenager"<<endl;    }  
  
        else //for adult person  
        cout<<"the person is adult"<<endl;  
    }  
    return 0;  
}
```

Write a C++ to find out whether a person is an adult, teenager, or child using nested if-else


```
C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.04.exe
Question No.04
enter age of person 1
the person is child
-----
Process exited after 1.312 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.04.exe
Question No.04
enter age of person 65
the person is adult
-----
Process exited after 1.059 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.04.exe
Question No.04
enter age of person 12
the person is teenager
-----
Process exited after 1.107 seconds with return value 0
Press any key to continue . . .
```

```
#include<iostream>
using namespace std;
int main()
{
    cout<<"Question No.04 "<<endl;
    int age; //declaraing age of person
    cout<<"enter age of person ";
    cin>>age; //taking input from user
    if (age>=0&&age<12) //for child
    {cout<<"the person is child"<<endl;
    }
    else{
        if(age>=12&&age<=19) //for a teenager
        {    cout<<"the person is teenager"<<endl;    }

        else //for adult person
        cout<<"the person is adult"<<endl;
        }
    return 0;
}
```

QUESTION No.05

```
//  
/* Write a C++ program that takes three number from the user and find  
the greatest number out of the three numbers using nested if-else statements.  
*/
```

```
#include<iostream>  
using namespace std;  
int main()  
{  
    cout<<"Question No.05"<<endl;  
    int a,b,c;  
    cout<<"enter values of a,b and c ";  
    cin>>a>>b>>c;  
    if(a>b){  
        if (a>c){  
            cout << "A is greatest";  
        }  
        else{  
            cout << "C is greatest";  
        }  
    }  
    else {  
        if (b>a){  
            if (b>c){  
                cout << "B is greatest";  
            }  
            else {  
                cout << "C is greatest";  
            }  
        }  
        else  
            cout<<"all have same values"<<endl;}
```

Write a C++ program that takes three number from the user and find the greatest number out of the three numbers using nested if-else statements.

return 0;

}

```
#include<iostream>
using namespace std;
int main()
{
    cout<<"Question No.05"<<endl;
    int a,b,c;
    cout<<"enter values of a,b and c ";
    cin>>a>>b>>c;
    if(a>b){
        if (a>c){
            cout << "A is greatest";
        }
        else{
            cout << "C is greatest";
        }
    }
    else {
        if (b>a){
            if (b>c){
                cout << "B is greatest";
            }
            else {
                cout << "C is greatest";
            }
        }
    }
    else
        cout<<"all have same values"<<endl;
    return 0;
}
```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.05.exe

```
Question No.05
enter values of a,b and c 3
3
3
all have same values

-----
Process exited after 1.321 seconds with return value 0
Press any key to continue . . .
```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.05.exe

```
Question No.05
enter values of a,b and c 8
7
6
A is greatest

-----
Process exited after 2.288 seconds with return value 0
Press any key to continue . . .
```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.05.exe

```
Question No.05
enter values of a,b and c 3
54
4
B is greatest

-----
Process exited after 2.198 seconds with return value 0
Press any key to continue . . .
```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.05.exe

```
Question No.05
enter values of a,b and c 2
3
4
C is greatest

-----
Process exited after 1.439 seconds with return value 0
Press any key to continue . . .
```

QUESTION No.06

```
//_____
```

```
/*Write a C++ program to check whether the alphabet entered by the user is Vowel or Consonant
```

```
using nested if-else.
```

```
*/
```

```
#include<iostream>
```

```
using namespace std;
```

```
int main() {
```

```
cout<<"Question No.06"<<endl;
```

```
char character; //declaring character
```

```
cout<<"Enter character ";
```

```
cin>>character;
```

```
if (isalpha(character)) { //checking is given character is alphabet and vowel
```

```
    if (character=='a' || character=='e' || character=='i' || character=='o' || character=='u')
```

```
//if character is vowel
```

```
cout<<"The given character is a vowel";
```

```
    else //if given character is not a vowel
```

```
        cout<<"the given character is consonant"<<endl;
```

```
}
```

```
else { // is given character is not an alphabet
```

```
    cout<<"invalid input"<<endl;
```

```
}
```

```
return 0;
```

```
}
```

Write a C++ program to check whether the alphabet entered by the user is Vowel or Consonant using nested if-else.

```

//
/*Write a C++ program to check whether the alphabet entered by the user is Vowel or Consonant
using nested if-else.
*/
#include<iostream>
using namespace std;
int main() {
    cout<<"Question No.06"<<endl;
    char character; //declaring character
    cout<<"Enter character ";
    cin>>character;
    if (isalpha(character)) { //checking is given character is alphabet and vowel
        if (character=='a' || character=='e' || character=='i' || character=='o' || character=='u') //if character is vowel
            cout<<"The given character is a vowel";
        else //if given character is not a vowel
            cout<<"the given character is consonant"<<endl;
    }
    else { // is given character is not an alphabet
        cout<<"invalid input"<<endl;
    }
    return 0;
}

```

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.06.exe

Question No.06
Enter character s
the given character is consonant

Process exited after 0.5232 seconds with return value 0
Press any key to continue . . .

Select C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.06.exe

Question No.06
Enter character u
The given character is a vowel

Process exited after 1.714 seconds with return value 0
Press any key to continue . . .

C:\Users\Dell\Desktop\C++\Home Tasks\Home Task No.03\Question no.06.exe

Question No.06
Enter character 0
invalid input

Process exited after 2.2 seconds with return value 0
Press any key to continue . . .