

```

//Jorge Rivas
#include <iostream>
#include <string>
#include <iomanip>
using namespace std;
int main()
{
    cout << " -----MENU-----" << endl;
    cout << "a.Compute area of a rectangle" << endl;
    cout << "b.Compute area of a triangle(base and height are given)" << endl;
    cout << "c.Compute area of a triangle(three sides are given)" << endl;
    cout << "d.Compute area of a trapezoid" << endl;
    char option;
    cout << "Choose an option : ";
    cin >> option;

    switch (option)
    {
        case 'a':
        {double length = 0.0;
        double width = 0.0;

        cout << "Enter the values of length and width : ";
        cin >> length;
        cin >> width;

        double area = length * width;
        cout << "Area is " << area;
        break;
        }

        case 'b':
        {cout << " Enter value of base(c) and height (h) : ";
        double h = 0.0;
        double c = 0.0;
        cin >> c;
        cin >> h;
        double area = (h * c) / 2;
        cout << "Area is " << area;
        break;
        }

        case 'c':
        {cout << "Enter the three sides of a triangle : ";
        double a = 0.0;
        double b = 0.0;
        double c = 0.0;
        cin >> a;
        cin >> b;
        cin >> c;
        double p = (a + b + c) / 2;
        double area = p * (p - a) * (p - b) * (p - c);
        cout << "Area is " << area;
        break;
        }

        case 'd':
        {cout << "Enter the sides of trapezoid : ";
        double b = 0.0;

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double a = 0.0;
double h = 0.0;
cin >> b;
cin >> a;
cin >> h;
double area = h * (a + b) / 2;
cout << "Area is " << area;
break;
}
default:
    cout << "Error option " << option << " incorrect! " << endl;
    break;
}

double adultmalesp = 200.20, adultfemalesp = 250.50, teenmalesp = 210.20,
teenfemalesp = 150.50, childsp = 100.25;
cout << endl;
cout << " " << endl;
cout << " " << endl;
cout << " " << endl;
cout << ".....Ace Club Fees....." << endl;
cout << "Adults" << endl;
cout << "Male.....200.20" << endl;
cout << "Female.....250.50" << endl;
cout << "Teenagers" << endl;
cout << "Male.....210.20" << endl;
cout << "Female.....150.50" << endl;
cout << "Children" << endl;
cout << "All.....100.25" << endl;
int age = 0;
char gender = ' ';
cout << "Enter your age : ";
cin >> age;
cout << "Enter your gender (m / f) ? ";
cin >> gender;

switch (gender)
{
case 'm': {
    if (age > 0 && age <= 12) { cout << childsp << endl; }
    else if (age >= 13 && age <= 17) { cout << teenmalesp << endl; }
    else { cout << adultmalesp << endl; }
    break;
}
case 'f': {
    if (age > 0 && age <= 12) { cout << childsp << endl; }
    else if (age >= 13 && age <= 17) { cout << teenfemalesp << endl; }
    else { cout << adultfemalesp << endl; }
    break;
}
default:
    cout << "Error incorrect input" << endl;
    break;
}
cout << " " << endl;
cout << " " << endl;
cout << " " << endl;
int month, day, year;

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char dummy;
string date;
cout << "Enter a date(mm/dd/yyyy): ";
cin >> month >> dummy >> day >> dummy >> year;
string dayN = "";
switch (month) {
    dayN = " ";
    if (day == 01 || day == 21 || day == 31) { dayN = "st"; }
    if (day == 02 || day == 22) { dayN = "nd"; }
    if (day == 03 || day == 23) { dayN = "rd"; }
    if (day != 01 && day != 21 && day != 31 && day != 02 && day != 22 && day !=
03 && day != 23) { dayN = "th"; }

    case 1: {
        if (day == 01 || day == 21 || day == 31) { dayN = "st"; }
        if (day == 02 || day == 22) { dayN = "nd"; }
        if (day == 03 || day == 23) { dayN = "rd"; }
        if (day != 01 && day != 21 && day != 31 && day != 02 && day != 22 && day !=
03 && day != 23) { dayN = "th"; }
        cout << "Jan " << day << dayN << ", " << year;
        break;
    }
    case 2: {
        cout << "Feb " << day << dayN << ", " << year;
        break;
    }
    case 3: {
        cout << "Mar " << day << dayN << ", " << year;
        break;
    }
    case 4: {
        cout << "Apr " << day << dayN << ", " << year;
        break;
    }
    case 5: {
        cout << "May " << day << dayN << ", " << year;
        break;
    }
    case 6: {
        cout << "Jun " << day << dayN << ", " << year;
        break;
    }
    case 7: {
        cout << "Jul " << day << dayN << ", " << year;
        break;
    }
    case 8: {
        if (day == 01 || day == 21 || day == 31) { dayN = "st"; }
        if (day == 02 || day == 22) { dayN = "nd"; }
        if (day == 03 || day == 23) { dayN = "rd"; }
        if (day != 01 && day != 21 && day != 31 && day != 02 && day != 22 && day !=
03 && day != 23) { dayN = "th"; }
        cout << "Aug " << day << dayN << ", " << year;
        break;
    }
    case 9: {
        cout << "Sep " << day << dayN << ", " << year;
        cout << dayN;
    }
}

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        break;
    }
    case 10: {
        cout << "Oct " << day << dayN << ", " << year;
        break;
    }
    case 11: {
        cout << "Nov " << day << dayN << ", " << year;
        break;
    }
    case 12: {
        cout << "Dec " << day << dayN << ", " << year;
        break;
    }
    default: {
        cout << "Error!" << endl;
        break;
    }
}

cout << " " << endl;
cout << " " << endl;
cout << " " << endl;
cout << "Use for loop to display the following including the missing numbers /
letters" << endl;
cout << " " << endl;
cout << "a. 5 10 15 20 ..50" << endl;
int a = 5;
for (int i = 0; i < 10; i++)
{
    cout << a << " ";
    a += 5;
}
cout << " " << endl;
cout << " " << endl;
cout << "b. 10 20 30 40 ..100" << endl;
int b = 10;
for (int i = 0; i < 10; i++)
{
    cout << b << " ";
    b += 10;
}
cout << " " << endl;
cout << " " << endl;
cout << "c. 20 18 16 ..2 " << endl;
int c = 20;
for (int i = 0; i < 10; i++)
{
    cout << c << " ";
    c -= 2;
}
cout << " " << endl;
cout << " " << endl;
cout << "d.A C E G ..Q " << endl;
string alphabet = "ABCDEFGH IJKLMNOPQ";
for (int i = 0; i < 18; i++)
{
    cout << alphabet[i] << " ";

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        alphabet[i++];
    }
    cout << " " << endl;
    cout << " " << endl;
    cout << "e. r  q p ..m " << endl;
    string alphabetbackwards = "rqponm";
    for (int i = 0; i < 7; i++)
    {
        cout << alphabetbackwards[i] << " ";
    }

    return 0;
}
```

```
C:\Users\jorge\source\repos\Project3\Debug\Project3.exe
-----MENU-----
a.Compute area of a rectangle
b.Compute area of a triangle(base and height are given)
c.Compute area of a triangle(three sides are given)
d.Compute area of a trapezoid
Choose an option : d
Enter the sides of trapezoid : 4
4
Area is 16

.....Ace Club Fees.....
Adults
Male.....200.20
Female.....250.50
Teenagers
Male.....210.20
Female.....150.50
Children
All.....100.25
Enter your age : 23
Enter your gender (m / f) ? m
200.2

Enter a date(mm/dd/yyyy): 10/01/2019
Oct 1, 2019

Use for loop to display the following including the missing numbers / letters

a. 5 10 15 20 ..50
5 10 15 20 25 30 35 40 45 50

b. 10 20 30 40 ..100
10 20 30 40 50 60 70 80 90 100

c. 20 18 16 ..2
```

```
C:\Users\jorge\source\repos\Project3\Debug\Project3.exe
c. 20 18 16 ..2
20 18 16 14 12 10 8 6 4 2

d.A C E G ..Q
A C E G I K M O Q

e. r q p ..m
r q p o n m
```

```
Microsoft Visual Studio Debug Console
.....Ace Club Fees.....
Adults
Male.....200.20
Female.....250.50
Teenagers
Male.....210.20
Female.....150.50
Children
All.....100.25
Enter your age : 25
Enter your gender (m / f) ? f
250.5

C:\Users\jorge\source\repos\Project3\Debug\Project3.exe (process 25116) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

```
Microsoft Visual Studio Debug Console
.....Ace Club Fees.....
Adults
Male.....200.20
Female.....250.50
Teenagers
Male.....210.20
Female.....150.50
Children
All.....100.25
Enter your age : 15
Enter your gender (m / f) ? m
210.2

C:\Users\jorge\source\repos\Project3\Debug\Project3.exe (process 33664) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

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Microsoft Visual Studio Debug Console
.....Ace Club Fees.....
Adults
Male.....200.20
Female.....250.50
Teenagers
Male.....210.20
Female.....150.50
Children
All.....100.25
Enter your age : 15
Enter your gender (m / f) ? f
150.5

C:\Users\jorge\source\repos\Project3\Debug\Project3.exe (process 34524) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

```
Microsoft Visual Studio Debug Console
.....Ace Club Fees.....
Adults
Male.....200.20
Female.....250.50
Teenagers
Male.....210.20
Female.....150.50
Children
All.....100.25
Enter your age : 10
Enter your gender (m / f) ? m
100.25

C:\Users\jorge\source\repos\Project3\Debug\Project3.exe (process 30416) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```



```
Microsoft Visual Studio Debug Console
.....Ace Club Fees.....
Adults
Male.....200.20
Female.....250.50
Teenagers
Male.....210.20
Female.....150.50
Children
All.....100.25
Enter your age : 10
Enter your gender (m / f) ? f
100.25

C:\Users\jorge\source\repos\Project3\Debug\Project3.exe (process 30476) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```