**C++ Programming**

**Sheet 2 – Selection controls**

**Q1:** What is the output of the following program?

#include <iostream>

using namespace std;

int main()

{

int x;

int a = 265;

cout << (x = 25) << endl;

cout << (x == 90) << endl;

cout << (x > 10) << endl;

cout << (3 \* x < a) << endl;

cout << (10 \* x == a - 15) << endl;

return 0;

}

Answer:

25

0

1

1

1

**Q2 :** Write C++ statements that output Male if the gender is 'M', Female if

the gender is 'F', and invalid gender otherwise.

Answer:

//Q2 sheet-2

#include <iostream>

using namespace std;

int main()

{

char gender;

cout <<"ENTER YOUR GENDER ! (M/F)";

cin >>gender;

if (gender == 'M' || gender =='m')

cout<<"Male\n";

else if (gender == 'F' || gender =='f')

cout<<"Female\n";

else

cout<<"Invaild gender!\n";

return 0;

} //End

**Q3 :** write c++ program that contains the following :

1. Declare variable called grade as a char
2. Declare variables called dues and credit as double
3. Use switch case to determine the value of dues based on the grade and credit as follow :

* If grade is equal to 'E' means Excellent then the dues is 50$
* If grade is equal to 'M' means medium level , and if the credit is at least 9 hours (9.0) then dues is 75$ else dues is 85$
* In case that grade is 'F' and if credit is less than 12 hours (12.0)

Then dues is 120$ else dues 100.

* Otherwise the dues take the default value which is 0 and print "Not a case";

Answer:

//Q3 sheet-2

#include <iostream>

using namespace std;

int main()

{

char grade;

double dues,credit;

cout<<"Please input your grade !: ";

cin>>grade;

cout <<"Please input your Credit!: ";

cin>>credit;

switch (grade)

{

case 'E': //Excellent

dues = 50;

break;

case 'M' : if (credit >=9)

dues = 75;

else

dues = 85;

break;

case 'F': if (credit <12)

dues = 120;

else

dues = 100;

break;

default: dues = 0; cout <<"NOT A CASE !\n";

}

cout <<"Your Dues based on your Credit and Grade is "<<dues<<endl;

} // End

**Q4 :** Write a program that prompts the user to input a number. The program should then output the number and a message saying whether the number is positive, negative, or zero.

Answer :

//sheet-2 Q4

Q2 sheet-2

#include <iostream>

using namespace std;

int main()

{

int x;

cout <<"please input and integer! ";

cin >>x;

if (x>0) cout<<"Positive\n";

else if (x<0) cout<<"Negative \n";

else cout <<"ZERO\n";

}//End

**Q5: What is the output of the following code segment?**

**int x = 20; int y = 1;**

**if(x < 0 || x > y && y != 9 ) --x; --y;**

**cout << x << " " << y << endl;**

**// note that y changed outside if**

**answer : 19 0**

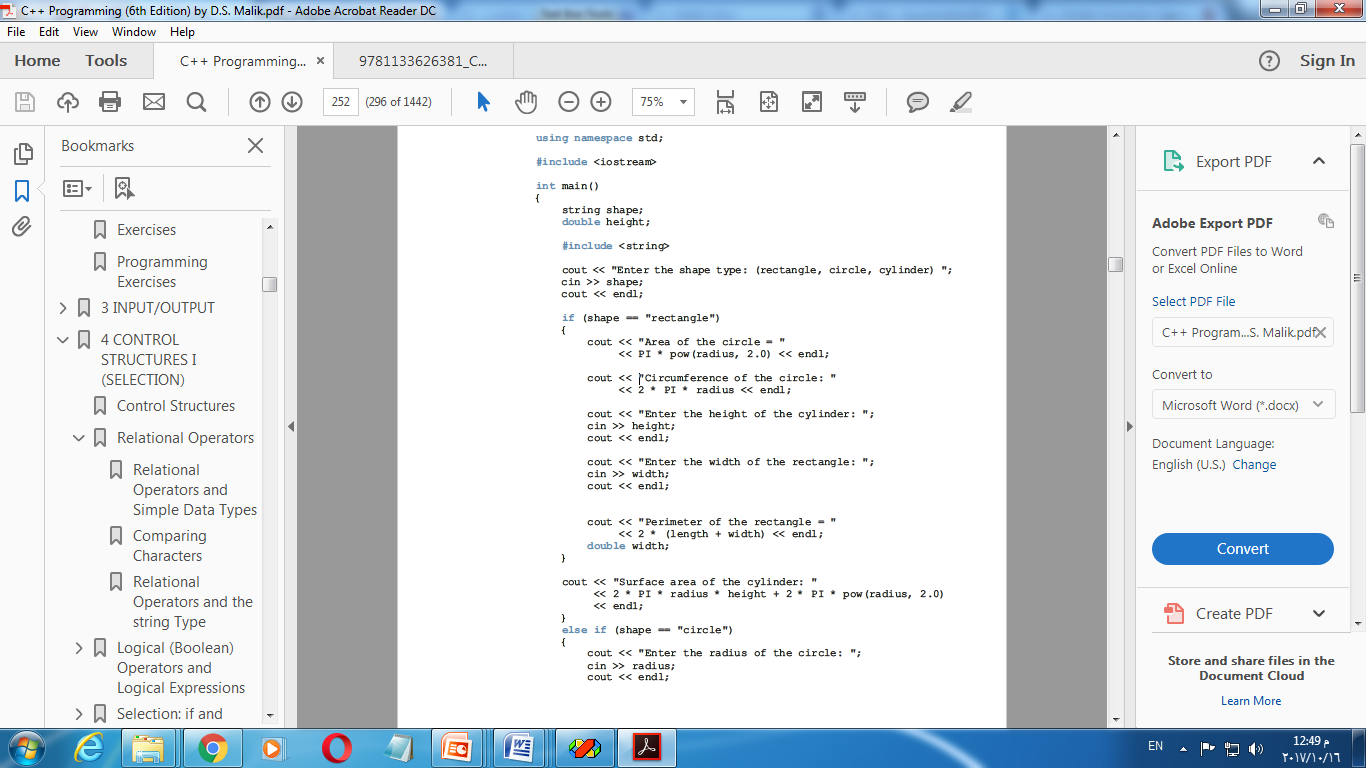
**Q6:** The statements in the following program are in incorrect order. Rearrange the statements so that they prompt the user to input the shape type (rectangle, circle, or cylinder) and the appropriate dimension of the shape. The program then outputs the following information about the shape:

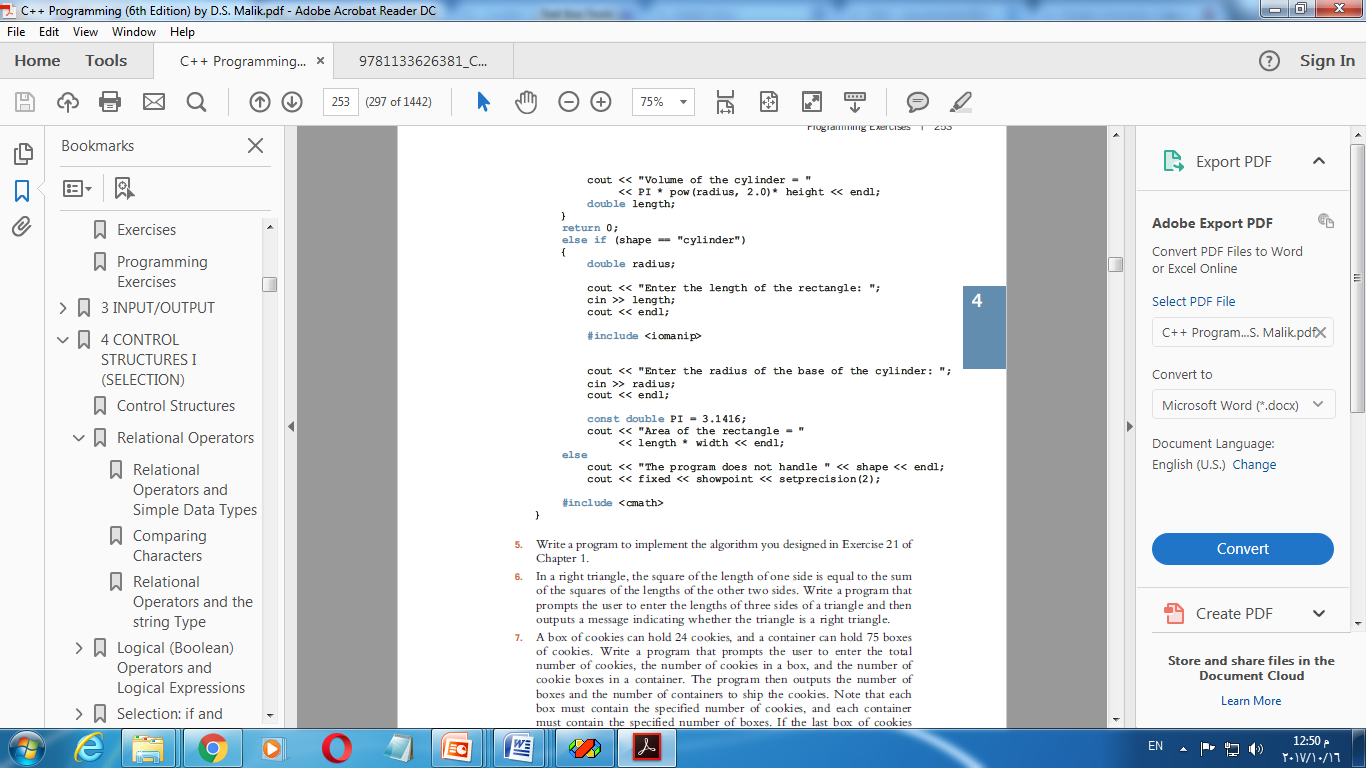
For a rectangle, it outputs the area and perimeter;

for a circle, it outputs the **area** and **circumference**(محيط);

and for a cylinder, it outputs the **volume** and **surface area**.

After rearranging the statements, your program should be properly work.



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