

Assignment 2

DATE

Group Members:

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Section A

1. Answer: False

Reason: There is no break statement under case 2. Thus, the flow will continue until case 3 and the interest will be replaced with 2.9 instead of 2.6.

2. Answer: True

Reason: x and y are assigned as integers. $2/3$ is equal to 0.6667 but since they are integers, the program will only print the number before the point which is 0.

3. Answer: True

Reason: The `terminate()` function causes a program to terminate, regardless of which function or control mechanism is executing because in C++, the `terminate()` function is called by default to stop the program.

4. Answer: True

Reason: At first, the value of a is initialized as 10. When the function is being called by the program, the value of x which equals to 5 is stored in b . Then $b++$ is added to a . This means that the value of b is added to a , then b is increased by 1. Thus, the value of a is 15 as $10 + 5 = 15$. Then, a is returned as 15. The value of a will remain as 15 after this function is completed. The value of x which equals to 12 will then be stored in b . $b++$ is added to a . Thus, the value of a is 27 as $15 + 12 = 27$. Then, a is returned as 27.

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When the function is being called by the program, the value of x which equals to 5 is stored in b .

Then $b++$ is added to a .

This means that the value of b is added to a , then b is increased by 1.

Thus, the value of a is 15 as $10 + 5 = 15$.

Then, a is returned as 15.

The value of a will remain as 15 after this function is completed.

The value of x which equals to 12 will then be stored in b .

$b++$ is added to a .

Thus, the value of a is 27 as $15 + 12 = 27$.

Then, a is returned as 27.

Section B

1. a) $x == 'y' ? cout << "If " << x << ", answer is = "<< 1 : "Else, answer is = "$
 $<< 0;$

b) `#include <iostream>`

`using namespace std;`

`int main()`

`{`

`char code;`

`float depositamount, withdrawamount, balance = 300;`

`cout << "Enter your transaction code, d - deposit, w - withdraw: \n";`

`cin << code;`

`switch (code)`

`{`

`case 'd': cout << "Enter amount RM";`

`cin >> depositamount;`

`balance += depositamount;`

`cout << "Your current balance is now RM " <<`

`balance << endl;`

`break;`

`case 'w': cout << "Enter amount RM";`

`cin >> withdrawamount;`

`balance -= withdrawamount;`

`cout << "Your current balance is now RM " <<`

`balance << endl;`

`break;`

`default:`

`cout << "The code is not allowed. \n";`

`cout << "Please try again.";`

`main();`

`}`

`return 0;`

`}`

2. a) i) #include <iostream>
using namespace std;

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int main()

{

int a, x = 0;

cout << "please enter a number";

cin >> a;

switch(a)

{

case 1:

x++;

break;

case 2:

x++;

break;

case 3:

x--;

break;

case 4:

x--;

break;

default:

x = x + 2;

break;

}

cout << x;

system("PAUSE");

return 0;

}

ii) #include <iostream>

using namespace std;

int main()

{

int a;

cout << "Enter a number in the range of 1 through 4: ";

cin >> a;

while (a < 1 && a > 4)

{

cout << "Your number is invalid!";

cout << "Enter a valid number: ";

cin >> a;

}

cout << "Your number is valid!" << endl;

return 0;

}

3. a) #include <iostream>

using namespace std;

void userData (int &numdays, float &dailyroomrate, float &medcharges,
float &servicecharges)

{

cout << "Enter number of days spent: ";

cin >> numdays;

cout << "Enter daily room rate: ";

cin >> dailyroomrate;

cout << "Enter medication charges: ";

cin >> medcharges;

cout << "Enter service charges: ";

cin >> servicecharges;

}

int main() {

int numdays;

float dailyroomrate, medcharges, servicecharges;

userData (numdays, dailyroomrate, medcharges, servicecharges);

cout << "The patient attributes are as follows: " << endl;

cout << "Number of days spent: " << numdays << endl;

cout << "Daily room rate: " << dailyroomrate << endl;

cout << "Medication charges: " << medcharges << endl;

cout << "Service charges: " << servicecharges << endl;

return 0;

}

b) #include <iostream>

using namespace std;

string patienttype;

float totalcharges (int numdays, float dailyroomrate, float medcharges,
float servicecharges)

{

float totcharges = numdays * dailyroomrate + medcharges
+ servicecharges;

return totcharges;

}

float totalcharges (float medcharges, float servicecharges)

{

float totcharges = medcharges + servicecharges;

return totcharges;

}

void userData (int &numdays, float &dailyroomrate, float &medcharges,
float &servicecharges)

{

cout << "Enter number of days spent: ";

cin >> numdays;

cout << "Enter daily room rate: ";

cin >> dailyroomrate;

cout >> "Enter medication charges: ";

cin >> medcharges;

cout >> "Enter service charges: ";

cin >> servicecharges;

}


```
int main ()
{
    int numdays;
    float dailyroomrate, medcharges, servicecharges;

    userData ( numdays, dailyroomrate, medcharges, servicecharges );

    cout << "Enter In-patient or out-patient: ";
    cin >> patienttype;

    if (patienttype == "in-patient")
    {
        float inpatientcharges = totalcharges (numdays, dailyroomrate,
        medcharges, servicecharges);

        cout << "Total charges for in-patient: RM " << inpatientcharges
        << endl;
    }

    if (patienttype == "out-patient")
    {
        float outpatientcharges = totalcharges (medcharges, servicecharges);
        cout << "Total charges for out-patient: RM " << outpatientcharges
        << endl;
    }

    return 0;
}
```


4. a) 3

b) 6 12

0 0 0

Enter two numbers: 12 14

12 14 0

14 15 -1

16 15 -1

14 15 -1