Exam answer June 2013

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Section A :

Question 1 : 3
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Section B :
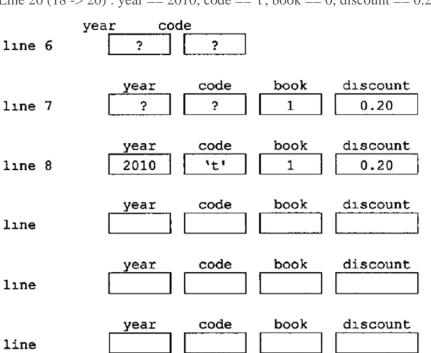
Question 1.a :
The purpose : Continue to increase the value of (s) by the value of
the variable (n) per loop until n is greater than 5.

Question 1.b :

The purpose : Continue to increase the value of (c) by 1 per loop
(five loops in total) when a specific element in the (numbers) array
which the index variable (i) points to is not equal to zero.

Question 2.a.i :
Line 8 : year == 2010, code == 't', book == 1, discount == 0.20
Line 9 : year == 2010, code == 't', book == 1, discount == 0.20
Line 10 (10 -> 17) : year == 2010, code == 't', book == 1, discount == 0.20
Line 18 : year == 2010, code == 't', book == 1, discount == 0.20
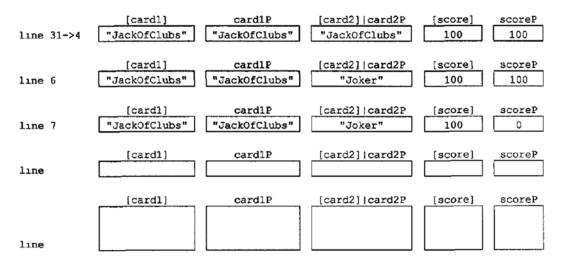Line 20 (18 -> 20) : year == 2010, code == 't', book == 0, discount == 0.20

	year	code	book	discount
line 6	?	?		
line 7	?	?	1	0.20
line 8	2010	't'	1	0.20
line				
line				
line				

Question 2.a.ii :

2010 b 1 0.35

Question 2.b.i :

Line 7 : card1 == "JackOfClubs", card1P == "JackOfClubs", card2 ==
"Joker", card2P == "Joker", score == 100, scoreP == 0
Line 8 : card1 == "JackOfClubs", card1P == "JackOfClubs", card2 ==
"Joker", card2P == "Joker", score == 100, scoreP == 0
Line 9 (9 -> 13) : card1 == "JackOfClubs", card1P == "JackOfClubs",
card2 == "Joker", card2P == "Joker", score == 100, scoreP == 0

	[card1]	card1P	[card2]|card2P	[score]	scoreP
line 31->4	"JackOfClubs"	"JackOfClubs"	"JackOfClubs"	100	100
line 6	"JackOfClubs"	"JackOfClubs"	"Joker"	100	100
line 7	"JackOfClubs"	"JackOfClubs"	"Joker"	100	0
line					
line					

Question 2.b.ii :

card2P = "AceOfHearts";
scoreP = 100;

Question 2.b.iii :

JackOfClubs 5OfClubs 100

Question 3 :

```
switch(nrWheels)
{
   case 2 : count2 = 1; break;
   case 4 : count4 = 1; break;
   default : if(nrWheels > 4) countMore = 1; break;
};
```

Question 4 :

```
name = 'B';
while(name == 'B' || name == 'E')
{
   cout << "Which one's product was sold? (B or E) : ";
   cin >> name;
   if(name == 'B' || name == 'E')
   {
      cout << "Enter sale : ";
      cin >> sale;
      if(name == 'B') bSales += sale;
      else eSales += sale;
   }
}
```

Question 5 :

```
if(time < 1) interest = 0.025;
else if(time < 2) interest = 0.030;
else if(time < 3) interest = 0.035;
else if(time < 4) interest = 0.040;
else if(time < 5) interest = 0.045;
else interest = 0.0475;
```

Question 6 :

```
float calcAverage(float sales[NUM_DAYS])
{
   float total = 0;
   for(int i = 0; i < NUM_DAYS; i++)
   total += sales[i];
   return total / (float) NUM_DAYS;
}
```

Question 7.a :

```
int training[4][3];
```

Question 7.b :

```
int training[4][3];
int max;

for(int i = 0; i < 4; i++)
{
   max = training[i][0];
   for(int j = 1; j < 3; j++)
   if(training[i][j] > max)
   max = training[i][j];
   cout << "The longest distance covered in week " << i + 1 << " was " << max << endl;
```

Question 8.a :

void check(int v1, double v2);
double mult(double v1, double v2);
void time(int &hrs, int &minutes, int &seconds);
int countlets(string str, char letter);

Question 8.b :

The differences :
+ The doubleNum1 takes a reference variable as an argument. Has no return value.
+ The doubleNum2 takes a normal variable as an argument. Has int return value.

How to call them :
int a = 15;
doubleNum1(a);
a = doubleNum2(15);
a = doubleNum2(a);

Question 8.c :

```
int cube(int a)
{
    return a * a * a;
}
```

answer = cube(n);

Question 9.a :

A R 9.99
A R 1.11

Question 9.b :

```
void read_Shoe_Record(ShoeType &new_Shoe)
{
    cout << "Enter style : ";
    cin >> new_Shoe.style;
    cout << "Enter price : ";
    cin >> new_Shoe.price;
}
```

Question 10 :

```
string changeCase(string senP)
{
    for(int i = 0; i < senP.size(); i++)
    {
        if(islower(senP[i])) senP[i] = toupper(senP[i]);
        else senP[i] = tolower(senP[i]);
    }
    return senP;
```