

Lab 3 Evelyn Luo

Program 1

```
evelyn luo lab 3 (Global Scope) main()
1 //Created by Evelyn Luo
2 //Lab 3
3 // September 26th 2024
4
5 #include <iostream>
6
7 int main()
8 {
9     //program 1 magic 8 ball
10
11     int answer;
12     char start, retry;
13
14     srand(time(NULL));
15     answer = (rand() % 8) + 1;
16
17     printf("\n WELCOME TO THE MAGIC BALL!\n\n ");
18     printf("Please ask a question and then type Q to get a response\n");
19     printf("\nPlease enter 'Q': ");
20     scanf_s("%c", &start);
21
22
23     do
24     {
25         printf("\n Shaking 8 ball.\n");
26         printf("\n Shaking 8 ball...\n");
27         printf("\n Shaking 8 ball...\n");
28
29         printf("\n\nAnswer incoming...\n");
30
31         switch (answer)
32         {
33             case 1:
34                 printf("\nLET THEM GO PLS\n");
35                 break;
36
37             case 2:
38                 printf("\nOh yeah, do that\n");
39                 break;
40
41             case 3:
42                 printf("\nMaybe don't ask a ball\n");
43                 break;
44
45             case 4:
46                 printf("\nDon't think so\n");
47                 break;
48
49             case 5:
50                 printf("\nNahh\n");
51                 break;
52
53             case 6:
54                 printf("\nGo for it\n");
55                 break;
56
57             case 7:
58                 printf("\nIt is not meant to be\n");
59                 break;
60
61             case 8:
62                 printf("\nWhy not\n");
63                 break;
64
65         }
66
67         printf("\n\nAre you satisfied with your answer? Remember, we are just a magic ball\n\nRetry? Y/N: \n");
68         scanf_s("%c", &retry);
69     } while (retry == 'Y');
70
71     if (retry == 'N')
72     {
73         printf("\n\nThank you for using our services!\n\n");
74     }
75
76     return 0;
77
78 }
```

Outcome 1

The image shows a C++ program named 'evelyn_luo_lab_3.cpp' and its execution output in the Visual Studio Debug console. The program is a 'magic 8 ball' simulation that generates random answers to user questions.

```
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5 #include <iostream>
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7 int main()
8 {
9     //program 1 magic 8 ball
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11     int answer;
12     char start, retry;
13
14     srand(time(NULL));
15     answer = (rand() % 8) + 1;
16
17     printf("\n WELCOME TO THE MAGIC BALL!\n\n");
18     printf("Please ask a question and then type Q to get a response\n");
19     printf("Please enter 'Q': ");
20     scanf("%c", &start);
21
22     do
23     {
24         printf("\n Shaking 8 ball.\n");
25         printf("\n Shaking 8 ball...\n");
26         printf("\n Shaking 8 ball...\n");
27
28         printf("\n\nAnswer incoming...\n");
29
30         switch (answer)
31         {
32             case 1:
33                 printf("\nLET THEM GO PLS\n");
34                 break;
35             case 2:
36                 printf("\nOh yeah, do that\n");
37                 break;
38             case 3:
39                 printf("\nMaybe don't ask a ball\n");
40                 break;
41             case 4:
42                 printf("\nDon't think so\n");
43                 break;
44             case 5:
45                 printf("\nDon't think so\n");
46                 break;
47             case 6:
48                 printf("\nDon't think so\n");
49                 break;
50             case 7:
51                 printf("\nDon't think so\n");
52                 break;
53             case 8:
54                 printf("\nDon't think so\n");
55                 break;
56         }
57
58         printf("Retry? Y/N: ");
59         scanf("%c", &retry);
60
61         if (retry == 'Y' || retry == 'y')
62             continue;
63     } while (start == 'Q' || start == 'q');
```

The execution output in the Visual Studio Debug console is as follows:

```
WELCOME TO THE MAGIC BALL!
Please ask a question and then type Q to get a response
Please enter 'Q': Q
Shaking 8 ball.
Shaking 8 ball..
Shaking 8 ball...
Shaking 8 ball...

Answer incoming...
LET THEM GO PLS

Are you satisfied with your answer? Remember, we are just a magic ball

Retry? Y/N:

Thank you for using our services!
C:\Users\evelyn\source\repos\evelyn_luo_lab_3\Debug\evelyn_luo_lab_3.exe (process 33576)
```

Program 2

```
evelyn luo lab 3.cpp  [x]
evelyn luo lab 3 (Global Scope) main()
1 //Created by Evelyn Luo
2 //Lab 3
3 // September 26th 2024
4
5 #include <iostream>
6
7 int main()
8 {
9     //program 2 dices
10
11     int ans, wer, yeah;
12     int comp = 0, you = 0;
13     char start;
14     srand(time(NULL));
15     ans = (rand() % 8) + 1;
16     wer = (rand() % 9) - 1;
17     yeah = ans + wer;
18
19     printf("\nWelcome to the silly program!\nWe roll dice and gamble.");
20     printf("\nWould you like to play? Y/N: ");
21     scanf_s("%c", &start);
22
23     while (start == 'Y')
24     {
25         printf("\n\nRolling dice.");
26         printf("\n\nRolling dice..");
27         printf("\n\nRolling dice...");
28
29         printf("\nThe sum is %d", yeah);
30
31         if (yeah == 9 || yeah == 15)
32         {
33             printf("\nThe player wins!\n");
34             you++;
35
36             printf("\n|-----|\n");
37             printf("|User %d \t\t Computer %d|", you, comp);
38             printf("\n|-----|\n");
39
40         }
41
42         else
43         {
44             printf("\nComputer wins!!\n");
45             comp++;
46
47             printf("\n|-----|\n");
48             printf("|User %d \t\t Computer %d|", you, comp);
49             printf("\n|-----|\n");
50
51         }
52
53     }
54
55     printf("\n\nWould you like to play again? Y/N: ");
56     scanf_s("%c", &start);
57
58 }
59
60 printf("\n\n\t\tGAME OVER\n\n");
61 printf("\n|-----|\n");
62 printf("|User %d \t\t Computer %d|", you, comp);
63 printf("\n|-----|\n");
64
65
66 return 0;
67 }
68 // A/N: I had saved this part in a visual studio doc but when i tried to open it again,
69 // the code just wouldn't load. I had to redo everything :D
70
```

Outcome 2

The image shows a Visual Studio IDE with a C++ file named 'evelyn_luo_lab_3.cpp' open. The code is a simple dice game. The debug console on the right shows the program's execution, including prompts for user input and the final game result.

```
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3 // September 26th 2024
4
5 #include <iostream>
6
7 int main()
8 {
9     //program 2 dices
10
11     int ans, wer, yeah;
12     int comp = 0, you = 0;
13     char start;
14     srand(time(NULL));
15     ans = (rand() % 8) + 1;
16     wer = (rand() % 9) - 1;
17     yeah = ans + wer;
18
19     printf("\nWelcome to the silly program!\nWe roll dice and gamble.");
20     printf("\nWould you like to play? Y/N: ");
21     scanf_s("%c", &start);
22
23     while (start == 'Y')
24     {
25         printf("\n\nRolling dice.");
26         printf("\n\nRolling dice..");
27         printf("\n\nRolling dice...");
28
29         printf("\nThe sum is %d", yeah);
30
31         if (yeah == 9 || yeah == 15)
32         {
33             printf("\nThe player wins!\n");
34             you++;
35
36             printf("\n|-----|\n");
37             printf("|User %d |t| Computer %d|", you, comp);
38             printf("\n|-----|\n");
39
40         }
41     }
```

Microsoft Visual Studio Debug Console Output:

```
Welcome to the silly program!
We roll dice and gamble.
Would you like to play? Y/N: Y

Rolling dice.
Rolling dice..
Rolling dice...
The sum is 6
Computer wins!!

|-----|
|User 0 | Computer 1|
|-----|

Would you like to play again? Y/N:

GAME OVER

|-----|
|User 0 | Computer 1|
|-----|

C:\Users\evelyn\source\repos\evelyn_luo_lab_3\x64\Debug\evelyn_luo_lab_3.exe (process 15740) exited with code 0 (0x0).
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 . . .
```