

# Practice Problem 1

## Source Code

```
Welcome C practice_problem1.c X
C practice_problem1.c > main()
1  #include <stdio.h>
2
3  int main() {
4      float a, b, c;
5
6      printf("Enter the three side of the triangle: ");
7      scanf("%f %f %f", &a, &b, &c);
8
9      if (a + b > c && b + c > a && c + a > b) {
10         if (a == b && b == c) {
11             printf("The triangle is Equilateral.\n");
12         } else if (a == b || b == c || a == c) {
13             printf("The triangle is Isosceles.\n");
14         } else {
15             printf("The triangle is Scalene.\n");
16         }
17     } else {
18         printf("The triangle is not valid.\n");
19     }
20
21     return 0;
22 }
23
```

## Input & Output

```
● parvej@parvej:~/Documents/CSE Lab Report/Lab 5$ cd ~/Documents/CSE Lab Report/Lab 5/
ort/Lab 5/"practice_problem1
Enter the three side of the triangle: 1 2 3
The triangle is not valid.
```

```
● parvej@parvej:~/Documents/CSE Lab Report/Lab 5$ cd ~/Documents/CSE Lab Report/Lab 5/
ort/Lab 5/"practice_problem1
Enter the three side of the triangle: 12 13 16
The triangle is Scalene.
```

# Practice Problem 2

## Source Code

```
C practice_problem2.c > main()
1  #include <stdio.h>
2
3  int main() {
4      char ch;
5
6      printf("Enter a character: ");
7      scanf("%c", &ch);
8
9      switch(ch) {
10         case 'a':
11         case 'e':
12         case 'i':
13         case 'o':
14         case 'u':
15         case 'A':
16         case 'E':
17         case 'I':
18         case 'O':
19         case 'U':
20             printf("%c is a vowel.\n", ch);
21             break;
22         default:
23             if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z')) {
24                 printf("%c is a consonant.\n", ch);
25             } else {
26                 printf("Invalid input.\n");
27             }
28             break;
29     }
30
31     return 0;
32 }
```

## Input & Output

```
● parvej@parvej:~/Documents/CSE I
  documents/CSE Lab Report/Lab 5/
  Enter a character: e
  e is a vowel.
```

```
● parvej@parvej:~/Documents/CSE I
  documents/CSE Lab Report/Lab 5/
  Enter a character: 2
  Invalid input.
```

# Practice Problem 3

## Source Code

## Input & Output

C practice\_problem3.c > ...

```
1  #include <stdio.h>
2
3  int main()
4  {
5      float salary, bonus;
6
7      printf("Enter the salary: ");
8      scanf("%f", &salary);
9
10     int range;
11     if (salary > 8000 && salary <= 10000)
12     {
13         range = 1;
14     }
15     else if (salary > 6000 && salary <= 8000)
16     {
17         range = 2;
18     }
19     else if (salary > 3000 && salary <= 6000)
20     {
21         range = 3;
22     }
23     else
24     {
25         range = 4;
26     }
27
28     switch (range)
29     {
30     case 1:
31         bonus = salary * 0.08;
32         break;
33     case 2:
34         bonus = salary * 0.05;
35         break;
36     case 3:
37         bonus = salary * 0.02;
38         break;
39     default:
40         bonus = salary * 0.01;
41         break;
42     }
43     printf("The bonus for a salary of %.2f is: %.2f\n", salary, bonus);
44     return 0;
45 }
```

```
parvej@parvej:~/Documents/CSE Lab Report/Lab 5$
ort/Lab 5/"practice_problem3
Enter the salary: 7000
The bonus for a salary of 7000.00 is: 350.00
```

# Practice Problem 4

## Source Code

```
C practice_problem4.c > ...
1  #include <stdio.h>
2
3  int main() {
4      int num;
5      printf("Enter a number: ");
6      scanf("%d", &num);
7
8      (num % 3 == 0) ? printf("%d is divisible by 3.\n", num) : printf("%d is not divisible by 3.\n", num);
9
10     return 0;
11 }
```

## Input & Output

```
● parvej@parvej:~/Documents/CSE Lab Report/Lab 5$ c
Documents/CSE Lab Report/Lab 5/"practice_problem4
Enter a number: 12
12 is divisible by 3.
```

```
● parvej@parvej:~/Documents/CSE Lab Report/Lab 5$ c
Documents/CSE Lab Report/Lab 5/"practice_problem4
Enter a number: 17
17 is not divisible by 3.
```

# Practice Problem 5

## Source Code

```
C practice_problem5.c > main()
1  #include <stdio.h>
2
3  int main()
4  {
5      int a, b, c, smallest;
6
7      printf("Enter three numbers: ");
8      scanf("%d %d %d", &a, &b, &c);
9
10     smallest = (a < b) ? ((a < c) ? a : c) : ((b < c) ? b : c);
11
12     printf("The smallest number is: %d\n", smallest);
13
14     return 0;
15 }
```

## Input & Output

```
• parvej@parvej:~/Documents/CSE Lab Report/Lab 5$
  documents/CSE Lab Report/Lab 5/"practice_problem5.c"
  Enter three numbers: 12 2 4
  The smallest number is: 2
```