

3.

```
9  #include <stdio.h>
10
11 int main() {
12     int num1, num2, choice;
13     float result;
14
15     printf("Choose operation:\n1. Addition\n2. Subtraction\n3. Multiplication\n4. Division\n");
16     printf("Enter choice: ");
17     scanf("%d", &choice);
18
19     printf("Enter two numbers: ");
20     scanf("%d %d", &num1, &num2);
21
22     switch(choice) {
23     case 1:
24         result = num1 + num2;
25         printf("Result: %.2f\n", result);
26         break;
27     case 2:
```

```
27         case 2:
28             result = num1 - num2;
29             printf("Result: %.2f\n", result);
30             break;
31         case 3:
32             result = num1 * num2;
33             printf("Result: %.2f\n", result);
34             break;
35         case 4:
36             if(num2 != 0) {
37                 result = (float)num1 / num2;
38                 printf("Result: %.2f\n", result);
39             } else {
40                 printf("Error: Division by zero is not allowed.\n");
41             }
42             break;
43         default:
44             printf("Error: Invalid operation choice.\n");
45     }
46
```

```
44         printf("Error: Invalid operation choice.\n");
45     }
46
47     return 0;
48 }
49
```

```
Choose operation:
1. Addition
2. Subtraction
3. Multiplication
4. Division
Enter choice: 3
Enter two numbers: 4 6
Result: 24.00

...Program finished with exit code 0
Press ENTER to exit console.
```

4.

```
9  #include <stdio.h>
10
11 int main() {
12     int targetNumber, guess, attempts = 0;
13
14     // Seed the random number generator
15     srand(time(NULL));
16
17     // Generate a random number between 1 and 100
18     targetNumber = rand() % 100 + 1;
19
20     printf("Welcome to the Guessing Game!\n");
21
22     // Loop until the user guesses the correct number
23     while(1) {
24         printf("Guess a number between 1 and 100: ");
25         scanf("%d", &guess);
26
27         // Increment the number of attempts
```

```
27      // Increment the number of attempts
28      attempts++;
29
30      // Check if the guess is too high, too low, or correct
31      if(guess < 1 || guess > 100) {
32          printf("Invalid input! Please guess a number between 1 and 100.\n");
33      } else if(guess > targetNumber) {
34          printf("Too high! Try again.\n");
35      } else if(guess < targetNumber) {
36          printf("Too low! Try again.\n");
37      } else {
38          printf("Congratulations! You guessed the number in %d attempts.\n", attempts);
39          break;
40      }
41  }
42
43  return 0;
44 }
45
```

input

```
Welcome to the Guessing Game!
Guess a number between 1 and 100: 40
Too high! Try again.
Guess a number between 1 and 100: 30
Too low! Try again.
Guess a number between 1 and 100: 35
Too low! Try again.
Guess a number between 1 and 100: 37
Congratulations! You guessed the number in 4 attempts.
```