

1. WAP to check for a valid triangle.

```
main.c
1
2
3 #include <stdio.h>
4
5 int main() {
6     float a, b, c;
7     printf("Enter 3 sides: ");
8     scanf("%f %f %f", &a, &b, &c);
9
10    if (a + b > c && a + c > b && b + c > a) {
11        printf("The sides form a valid triangle.\n");
12    } else {
13        printf("The sides not form a valid triangle.\n");
14    }
15
16    return 0;
17 }
18
```

Enter 3 sides: 4 5 6
The sides form a valid triangle.

2. WAP to check if a character is an Alphabet.

```
main.c
1  #include <stdio.h>
2
3  int main() {
4      char ch;
5      printf("Enter a character: ");
6      scanf("%c", &ch);
7      if ((ch >= 'A' && ch <= 'Z') || (ch >= 'a' && ch <= 'z')) {
8          printf("%c is an alphabet.\n", ch);
9      } else {
10         printf("%c is not an alphabet.\n", ch);
11     }
12
13     return 0;
14 }
15
```

Enter a character: d
d is an alphabet.

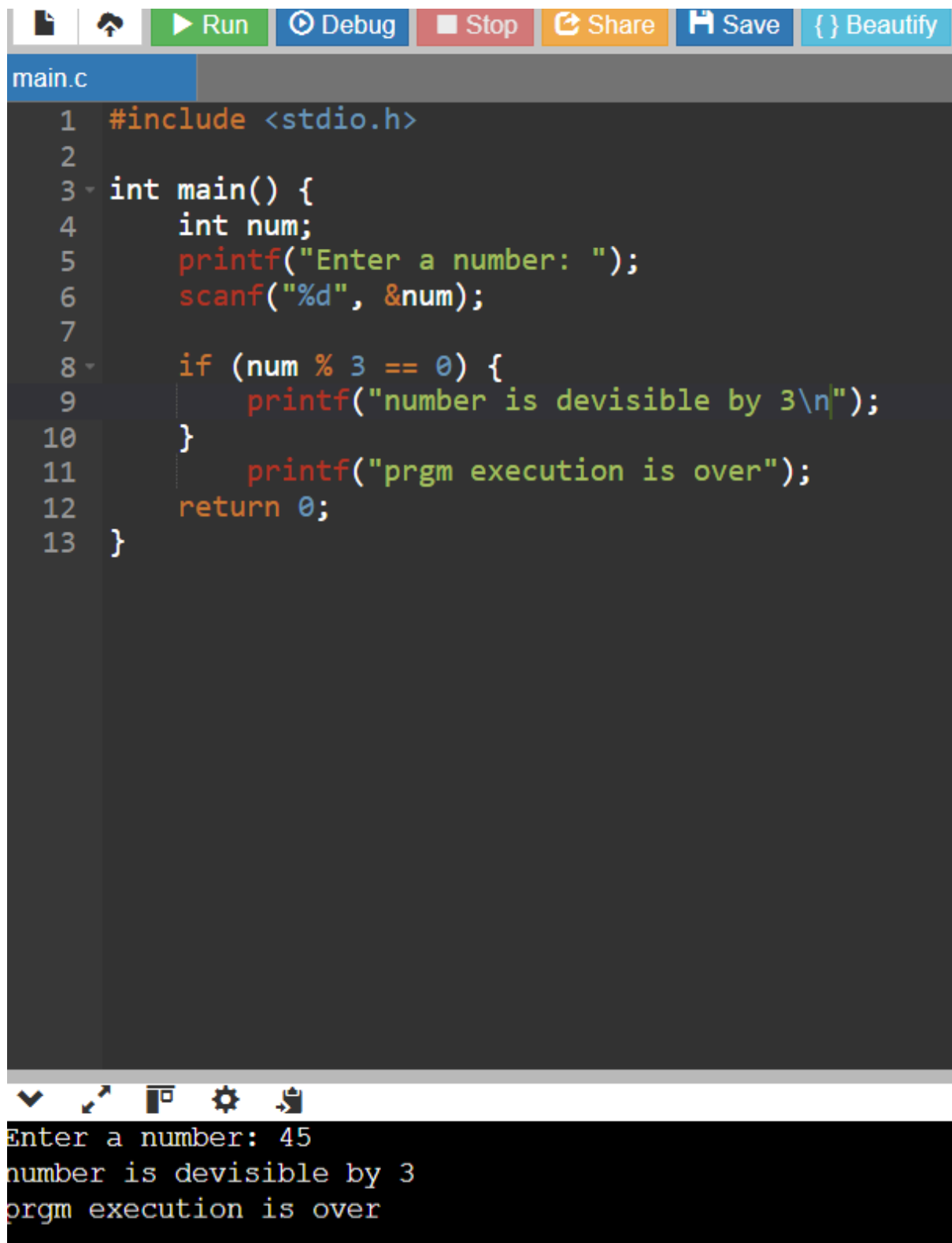
3. WAP to check if a Year is a leap Year.

```
main.c
1  #include <stdio.h>
2
3  int main() {
4      int year;
5      printf("Enter a year: ");
6      scanf("%d", &year);
7
8      if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {
9          printf("%d is a leap year.\n", year);
10     }
11     printf("prgm execution is over");
12     return 0;
13 }
```

input

```
Enter a year: 2000
2000 is a leap year.
prgm execution is over
```

4. WAP to check if a number is divisible by 3.



```
1  #include <stdio.h>
2
3  int main() {
4      int num;
5      printf("Enter a number: ");
6      scanf("%d", &num);
7
8      if (num % 3 == 0) {
9          printf("number is devisible by 3\n");
10     }
11     printf("prgm execution is over");
12     return 0;
13 }
```

Enter a number: 45
number is devisible by 3
prgm execution is over

5. WAP to check for Uppercase Characters.

```
main.c
1  #include <stdio.h>
2
3  int main() {
4      char ch;
5      printf("Enter a character: ");
6      scanf("%c", &ch);
7      if (ch >= 'A' && ch <= 'Z') {
8          printf("%c is uppercase.\n", ch);
9      }
10     printf("prgm execution is over\n");
11
12     return 0;
13 }
```

Enter a character: A
A is uppercase.
prgm execution is over

6. WAP to check for Special character.

```
main.c
1  #include <stdio.h>
2
3  int main() {
4
5      char ch;
6      printf("enter a character ");
7      scanf("%c",&ch);
8
9      if((ch >='A' && ch<='Z') || (ch >='a' && ch<='z'))
10     {
11         printf("%c is alhabet ",ch);
12     }
13     else if(ch >= '0' && ch <='9')
14     {
15         printf("%c is numeric ",ch);
16     }
17     else{
18         printf("%c is special character ",ch);
19     }
20
21     return 0;
22 }
```

enter a character %
% is special character

WAP to calculate the electricity bill based on the formula mentioned below

Calculations

To calculate your electricity bill, follow these steps:

Watts = (amps) x (volts)

Kilowatt-hours = (watts) x (usage) / 1000.

$\text{Cost} = (\text{kilowatt-hours}) \times (\text{electricity rate})$

1. Subtract the current meter reading from the previous month's reading to find the energy consumption.

2. Multiply the units consumed by the per-unit charges based on the applicable slabs (e.g., Rs. 4.22 for 1-100 units, Rs. 5.02 for 101-200 units).

3. Add the fixed charge and energy duty (e.g., Rs. 40 fixed charge and Rs. 0.15 per unit) to the energy charges.

4. The sum of the energy charges, fixed charge, and energy duty gives you the total bill amount.

Example: If you consumed 250 units with the applicable slabs mentioned above, the energy charges would be Rs. 1218.

Adding the fixed charge and energy duty, the total bill amount would be Rs. 1296

The image shows a code editor window with a file named 'main.c'. The code is a C program that calculates the total bill amount for electricity based on the number of units consumed. It uses conditional logic to apply different rates for different ranges of units consumed. The program prompts the user for previous and current readings, calculates the units consumed, and then calculates the total bill amount based on the units consumed. The output shows the total bill amount as Rs 477.00 for 500 units consumed.

```
1 #include<stdio.h>
2 int main(){
3     int previousreading,currentreading,unitsconsumed;
4     float energycharge=0;
5     float fixedcharge = 40, energyduty=0.15, totalbill;
6     printf("enter previous reading ");
7     scanf("%d",&previousreading);
8     printf("enter current reading ");
9     scanf("%d",&currentreading);
10    unitsconsumed = currentreading - previousreading;
11    if( unitsconsumed <= 100)
12    {
13        energycharge= unitsconsumed * 4.22;
14    }
15    else if(unitsconsumed <= 200){
16        energycharge = (100*4.22)+((unitsconsumed - 100) * 5.02);
17    }
18    else{
19        energycharge = (100 * 4.22) +(100 * 5.02) + ((unitsconsumed - 200) * 6.00);
20    }
21    totalbill = energycharge + fixedcharge +(unitsconsumed * energyduty);
22    printf("total bill amount: Rs %.2f\n",totalbill);
23    return 0;
24 }
25 }
```

input

```
enter previous reading 500
enter current reading 600
total bill amount: Rs 477.00
```

1. WAP to print Fibonacci Series up to a Given Number.


```
main.c
1  #include <stdio.h>
2
3  int main() {
4      int n;
5      printf("Enter the number");
6      scanf("%d", &n);
7
8      int a = 0, b = 1, next = 0;
9
10     printf("Fibonacci Series up to %d: ", n);
11
12     while (next <= n) {
13         printf("%d ", next);
14         a = b;
15         b = next;
16         next = a + b;
17     }
18
19     return 0;
20 }
```

Enter the number5
Fibonacci Series up to 5: 0 1 1 2 3 5

2. WAP to print factorial of a number.

```
main.c
1  #include <stdio.h>
2
3  int main() {
4      int num, factorial = 1;
5
6      printf("Enter a number to calculate its factorial: ");
7      scanf("%d", &num);
8
9      int i = 1;
10     while (i <= num) {
11         factorial *= i;
12         i++;
13     }
14
15     printf("Factorial of %d is %d\n", num, factorial);
16
17     return 0;
18 }
```

Enter a number to calculate its factorial: 4
Factorial of 4 is 24

3. WAP to check whether the number is Prime or not.

```
main.c
1  #include <stdio.h>
2
3  int main() {
4      int num;
5      printf("Enter a number: ");
6      scanf("%d", &num);
7
8      if (num <= 1) {
9          printf("%d is not a prime number.\n", num);
10     } else {
11         int i = 2;
12
13         while (i * i <= num) {
14             if (num % i == 0) {
15                 printf("%d is not a prime number.\n", num);
16                 return 0;
17             }
18
19             i++;
20         }
21
22         printf("%d is a prime number.\n", num);
23     }
24
25     return 0;
26 }
```

Enter a number: 20
20 is not a prime number.

4. WAP to print lower case alphabets.

main.c

```
1  #include <stdio.h>
2
3  int main() {
4      char ch = 'a';
5
6      while (ch <= 'z') {
7          printf("%c ", ch);
8          ch++;
9      }
10
11     printf("\n");
12     return 0;
13 }
```



a b c d e f g h i j k l m n o p q r s t u v w x y z