

```
1 #include <stdio.h>
2 long long fact(int n) {
3     if(n == 0) return 1;
4     return n * fact(n - 1);
5 }
6 int main() {
7     int n;
8     printf("enter a number:");
9     scanf("%d", &n);
10    printf("%lld", fact(n));
11    return 0;
12 }
13
```

```
1 #include <stdio.h>
2 int main() {
3     int n, sum = 0;
4     printf("enter a number:");
5     scanf("%d", &n);
6     for(int i = 1; i <= n; i++){
7         sum += i;
8     }
9     printf("%d", sum);
10    return 0;
11 }
12
```

```
1 #include <stdio.h>
2 long long fib(int n) {
3     if(n == 0) return 0;
4     if(n == 1) return 1;
5     return fib(n-1) + fib(n-2);
6 }
7 int main() {
8     int n;
9     printf("enter a number:");
10    scanf("%d", &n);
11    printf("%lld", fib(n));
12    return 0;
13 }
14
```

```
1 #include <stdio.h>
2 int main() {
3     long long num;
4     long long k;
5     printf("enter the number and the negative number:");
6     scanf("%lld %lld", &num, &k);
7     if(k >= 0) {
8         printf("Divisor must be negative");
9         return 0;
10    }
11    if(num % k == 0)
12        printf("Divisible");
13    else
14        printf("Not divisible");
15
16    return 0;
17 }
18
```

```
1 #include <stdio.h>
2 #include <string.h>
3 int main() {
4     int n;
5     scanf("%d", &n);
6     printf("enter the number of rows:");
7     char arr[n][100];
8     for(int i = 0; i < n; i++){
9         scanf("%s", arr[i]);
10    }
11    for(int i = n - 1; i >= 0; i--){
12        printf("%s\n", arr[i]);
13    }
14    return 0;
15 }
16
17
18
```

```
1 #include <stdio.h>
2 #include <string.h>
3 void reverse(char s[]) {
4     int i = 0, j = strlen(s)-1;
5     while(i < j) {
6         char t = s[i];
7         s[i] = s[j];
8         s[j] = t;
9         i++; j--;
10    }
11 }
12 int main() {
13     int n;
14     printf("enter the number of rows:");
15     scanf("%d", &n);
16     char arr[n][100];
17     for(int i = 0; i < n; i++)
18         scanf("%s", arr[i]);
19     for(int i = 0; i < n; i++) {
20         reverse(arr[i]);
21         printf("%s\n", arr[i]);
22     }
23     return 0;
24 }
25
```

```
1 #include <stdio.h>
2 #include <string.h>
3 #include <ctype.h>
4 int main() {
5     int T;
6     printf("enter number of test case:");
7     scanf("%d", &T);
8     while(T--) {
9         char s[200];
10        scanf("%s", s);
11        int len = strlen(s);
12        int valid = 1;
13
14        if(len != 10) {
15            valid = 0;
16        }
17
18        if(s[0] == '0') {
19            valid = 0;
20        }
21        for(int i = 0; i < len; i++) {
22            if(!isdigit(s[i])) {
23                valid = 0;
24                break;
25            }
26        }
27
28        if(valid)
29            printf("YES\n");
30        else
31            printf("NO\n");
32    }
33
34    return 0;
35 }
```

```
1 #include <stdio.h>
2 float average(int n) {
3     float sum = 0;
4     for(int i = 1; i <= n; i++) {
5         sum += i * 10;    // i-th multiple of 10
6     }
7     return sum / n;
8 }
9 int main() {
10     int n;
11     printf("enter the number of elements:");
12     scanf("%d", &n);
13     printf("%.2f", average(n));
14     return 0;
15 }
16
```

```
1 #include <stdio.h>
2 float average_while(int a[], int n) {
3     float sum = 0.0;
4     int i = 0;
5     while(i < n) {
6         sum += a[i];
7         i++;
8     }
9     return sum / n;
10 }
11 int main() {
12     int n;
13     scanf("%d", &n);
14
15     int arr[n];
16     for(int i = 0; i < n; i++)
17         scanf("%d", &arr[i]);
18
19     printf("%f", average_while(arr, n));
20     return 0;
21 }
22
```

```
1 #include <stdio.h>
2 int main() {
3     int n;
4     printf("enter number of elements:");
5     scanf("%d", &n);
6     int arr[n];
7     int freq[1002] = {0};
8
9     for(int i = 0; i < n; i++) {
10         scanf("%d", &arr[i]);
11         freq[arr[i]]++;
12     }
13
14     int count = 0;
15     for(int i = 0; i <= 1001; i++) {
16         if(freq[i] == 1)
17             count++;
18     }
19
20     printf("%d", count);
21
22     return 0;
23 }
24 }
```

```
1 #include <stdio.h>
2 int main() {
3     char s[200];
4     printf("enter the sentences:");
5     fgets(s, sizeof(s), stdin);
6     int words = 0;
7     for(int i = 0; s[i] != '\0'; i++) {
8         if(s[i] == ' ')
9             words++;
10    }
11    printf("%d", words + 1);
12    return 0;
13 }
14
```

```
1 #include <stdio.h>
2 #include <string.h>
3 int main() {
4     char a[100], b[100];
5     printf("enter the 2 strs:");
6     scanf("%s %s", a, b);
7     if(strlen(a) != strlen(b)) {
8         printf("Not Anagram");
9         return 0;
10    }
11    int freq1[256] = {0}, freq2[256] = {0};
12    for(int i = 0; a[i]; i++) freq1[(unsigned char)a[i]]++;
13    for(int i = 0; b[i]; i++) freq2[(unsigned char)b[i]]++;
14    for(int i = 0; i < 256; i++) {
15        if(freq1[i] != freq2[i]) {
16            printf("Not Anagram");
17            return 0;
18        }
19    }
20    printf("Anagram");
21    return 0;
22 }
23
```