Final Test

1

```c
#include<stdio.h>

int main() {

    int width, length, area;

    printf("Enter a length of rectangle: ");
    scanf("%d", &length);

    printf("Enter a width of rectangle: ");
    scanf("%d", &width);

    printf("\nans:\n");
    area = length * width;
    printf("area of rectangle is: %d", area);

    return 0;

}
```

```
Enter a length of rectangle: 10
Enter a width of rectangle: 15

ans:
area of rectangle is: 150
```

2

```c
#include<stdio.h>

int main() {

    int first, second, temp;

    printf("Enter a first number: ");
    scanf("%d", &first);

    printf("Enter a second number: ");
    scanf("%d", &second);

    temp = first;
    first = second;
    second = temp;

    printf("\nans:\n");
    printf("Your first number is: %d\n", first);
    printf("Your second number is: %d", second);

    return 0;

}
```

```
Enter a first number: 40
Enter a second number: 10

ans:
Your first number is: 10
Your second number is: 40
```

3

```c
#include<stdio.h>

int main() {

    int num;

    printf("Enter a number: ");
    scanf("%d", &num);

    printf("\nans:\n");
    if (num % 2 == 0) {
        printf("%d is even number", num);
    } else {
        printf("%d is odd number", num);
    }

    return 0;

}
```

```
Enter a number: 5

ans:
5 is odd number
```

```
Enter a number: 8

ans:
8 is even number
```

4

```c
#include<stdio.h>

int main() {

    int num;

    printf("Enter a number: ");
    scanf("%d", &num);

    printf("\nans:\n");
    if (num % 5 == 0) {
        printf("%d is divisible by 5", num);
    } else {
        printf("%d is not divisible by 5", num);
    }

    return 0;

}
```

```
Enter a number: 50

ans:
50 is divisible by 5
```

```
Enter a number: 42

ans:
42 is not divisible by 5
```

5

```c
#include<stdio.h>

int main() {

    int ary[3], max, i;

    for (i=0; i<3; i++) {
        printf("Enter a %d number in array :" , i+1);
        scanf("%d", &ary[i]);
    }

    for (i=0; i<3; i++) {
        if (ary[i] > ary[i+1]) {
            max = ary[i];
        }
    }

    printf("\nans:\n");
    printf("%d", max);

    return 0;

}
```

6

```c
#include<stdio.h>

int main() {

    int n, i, x, rem, num;

    printf("Enter a number: ");
    scanf("%d", &n);

    x = n;

    for (i=1; i<=n; i++) {
        rem = n % 10;
        num = num + (rem * rem * rem);
        n = n / 10;
    }

    printf("\nans:\n");
    if (x == num) {
        printf("%d is armstrong number", x);
    } else {
        printf("%d is not armstrong number", x);
    }

    return 0;

}
```

```
Enter a number: 153

ans:
153 is armstrong number
```

```
Enter a number: 7

ans:
7 is not armstrong number
```

7

```c
#include<stdio.h>

int main() {

    int n, i, num;

    printf("Enter a number: ");
    scanf("%d", &n);

    for (i=n; i>=1; i--) {
        num = num * i;
    }

    printf("\nans:\n");
    printf("%d", num);

    return 0;

}
```

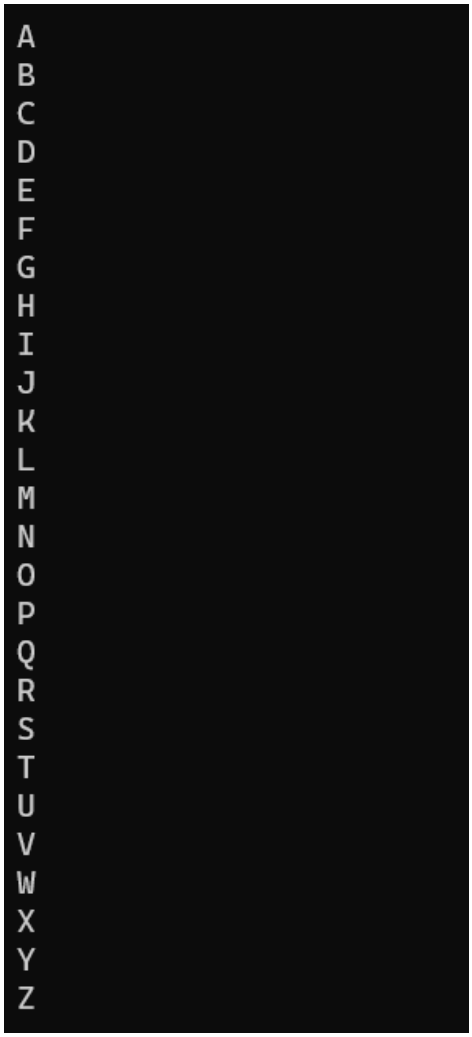
```
Enter a number: 5

ans:
120
```

8

```c
#include<stdio.h>

int main() {

    int n, i, num, x;

    printf("Enter a number: ");
    scanf("%d", &n);

    if (n>1) {
        if (n == 2) {
            printf("%d is prime number", n);
        } else {
            for (i=2; i<n-1; i++) {
                if (i % n == 0){
                    return x = 1;
                    break;
                } else {
                    return x = 0;
                }
            }
        }
    } else {
        printf("%d is not desidable number");
    }

    printf("\nans:\n");
    if (x = 0) {
        printf("%d is prime number", n);
    } else {
        printf("%d is not a prime number", n);
    }

    return 0;

}
```

9

```c
#include<stdio.h>

int main() {

    char i;

    for (i='A'; i<='Z'; i++) {
        printf("%c\n", i);
    }

    return 0;

}
```



10

```c
#include<stdio.h>

int main() {

    char str[100], ans;

    printf("Enter a string: ");
    gets(str);

    strrev(str);
    printf("\nreverse string is: ");
    puts(str);

    return 0;

}
```

```
Enter a string: hello

reverse string is: olleh
```

11

```c
#include<stdio.h>

int main() {

    char str[100], i, count = 0, n;
    int ans;

    printf("Enter a string: ");
    gets(str);

    for (i=0; i<n; i++) {
        n = n / 10;
        count++;
    }

    printf("%d", count);

//    ans = strlen(str);
//    printf("%d", ans);

    return 0;

}
```

12

```c
#include<stdio.h>

int main() {

    int ary[10], i, lower;

    for (i=0; i<10; i++) {
        printf("Enter a %d number in array :" , i+1);
        scanf("%d", &ary[i]);
    }

    for (i=0; i<10; i++) {
        if (ary[i+1] > ary[i]) {
            lower = ary[i];
        }
    }

    printf("\nans:\n");
    printf("%d", lower);

    return 0;

}
```

13

```c
#include<stdio.h>
int main() {
    float amount, discount, total_amount;
    char product;
    printf("Enter a amount: ");
    scanf("%f", &amount);
    printf("Enter a Mill Cloth for M or Heandloom items for H: ");
    scanf(" %c", &product);
    if (amount > 0 && amount <= 100) {
        if (product == 'M' || product == 'm') {
            discount = amount * 0 / 100;
        } else if (product == 'H' || product == 'h') {
            discount = amount * 5 / 100;
        } else {
            printf("invalid product");
        }
    } else if (amount >= 101 && amount <= 200) {
        if (product == 'M' || product == 'm') {
            discount = amount * 5 / 100;
        } else if (product == 'H' || product == 'h') {
            discount = amount * 7.5 / 100;
        } else {
            printf("invalid product");
        }
    } else if (amount >= 201 && amount <= 300) {
        if (product == 'M' || product == 'm') {
            discount = amount * 7.5 / 100;
        } else if (product == 'H' || product == 'h') {
            discount = amount * 10 / 100;
        } else {
            printf("invalid product");
        }
    } else if (amount > 300) {
        if (product == 'M' || product == 'm') {
            discount = amount * 10 / 100;
        } else if (product == 'H' || product == 'h') {
            discount = amount * 15 / 100;
        } else {
            printf("invalid product");
        }
    }
    total_amount = amount - discount;
    printf("\nans:\n");
    printf("Your Amount Is: %f\n", amount);
    printf("Your Discount Is: %f\n", discount);
    printf("Your Total Amount Is: %f", total_amount);
    return 0;
}
```

```
Enter a amount: 50
Enter a Mill Cloth for M or Heandloom items for H: m

ans:
Your Amount Is: 50.000000
Your Discount Is: 0.000000
Your Total Amount Is: 50.000000
```

```
Enter a amount: 250
Enter a Mill Cloth for M or Heandloom items for H: h

ans:
Your Amount Is: 250.000000
Your Discount Is: 25.000000
Your Total Amount Is: 225.000000
```

14

```c
#include<stdio.h>

int main() {

    int i , j, k;

    for (i=1; i<=5; i++) {
        for (k=5; k>i; k--) {
            printf("  ");
        }
        for (j=1; j<=i; j++) {
            printf("* ");
        }
        for (j=1+1; j<=i; j++) {
            printf("* ");
        }
        printf("\n");
    }

    return 0;

}
```

15

```c
#include<stdio.h>

int main() {

    int i , j, k;

    for (i=1; i<=5; i++) {
        for (j=1; j<=i; j++) {
            printf("%d ", j);
        }
        for (k=5; k>i; k--) {
            printf("  ");
        }
        for (k=5; k>i; k--) {
            printf("  ");
        }
        for (j=i; j>=1; j--) {
            printf("%d ", j);
        }
        printf("\n");
    }

    return 0;

}
```

```
1                   1
1 2               2 1
1 2 3           3 2 1
1 2 3 4       4 3 2 1
1 2 3 4 5 5 4 3 2 1
```

16

```c
#include<stdio.h>

int main() {

    int i , j;

    for (i=1; i<=5; i++) {
        for (j=1; j<=i; j++) {
            printf("%d ", j);
        }
        printf("\n");
    }
    for (i=5; i>=1; i--) {
        for (j=1; j<i; j++) {
            printf("%d ", j);
        }
        printf("\n");
    }

    return 0;

}
```

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

17

```c
#include<stdio.h>

int main() {

    int i , j, k = 1;

    for (i=1; i<=5; i++) {
        for (j=1; j<=i; j++) {
            printf("%d ", k++);
        }
        printf("\n");
    }

    return 0;

}
```

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```