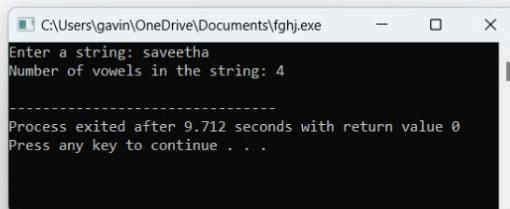


pattern 4 assi7.cpp fghj.cpp

```
1  #include <stdio.h>
2  #include <string.h>
3
4  int main() {
5      char str[100];
6      int vowels = 0, i;
7
8      printf("Enter a string: ");
9      fgets(str, 100, stdin);
10
11     for(i = 0; i < strlen(str); i++) {
12         if(str[i] == 'a' || str[i] == 'e' || str[i] == 'i' || str[i] == 'o' || str[i] == 'u' || str[i] == 'A' || str[i] == 'E' || str[i] == 'I' ||
13            vowels++;
14     }
15
16     printf("Number of vowels in the string: %d\n", vowels);
17
18     return 0;
19 }
```



```
C:\Users\gavin\OneDrive\Documents\fghj.exe
Enter a string: saveetha
Number of vowels in the string: 4
-----
Process exited after 9.712 seconds with return value 0
Press any key to continue . . .
```

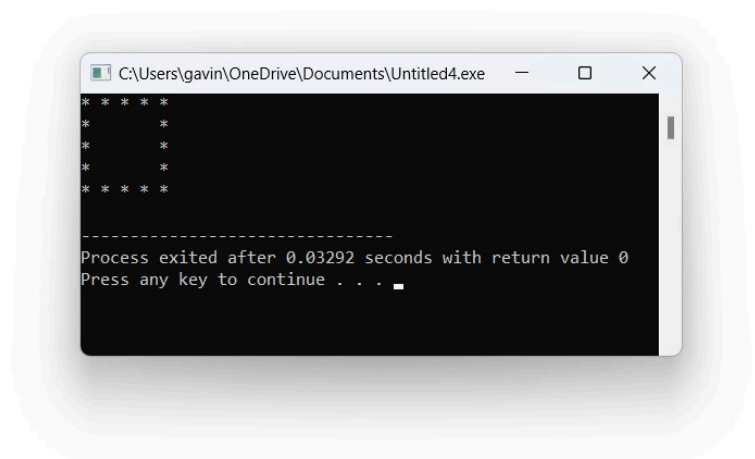
```

{
    int rows = 5;

    // outer loop to iterator through each row
    for (int i = 0; i < rows; i++) {

        // inner loop to print * star in each row
        for (int j = 0; j < rows; j++) {
            // statement to check boundry condition
            if (i > 0 && i < rows - 1 && j > 0
                && j < rows - 1) {
                printf(" ");
            }
            else {
                printf("* ");
            }
        }
        printf("\n");
    }
    return 0;
}

```

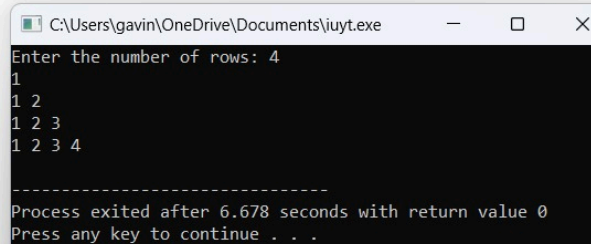


```
jjh assi7.cpp [*] Untitled12.cpp ty.cpp
1  #include <stdio.h>
2  #include <string.h>
3
4  int main() {
5      char str[100];
6      printf("Enter a string: ");
7      fgets(str, sizeof(str), stdin);
8
9      for(int i = 0; i < strlen(str); i++) {
10         switch(str[i]) {
11             case 'a':
12             case 'e':
13             case 'i':
14             case 'o':
15             case 'u':
16                 str[i] = '$';
17                 break;
18             default:
19                 continue;
20         }
21     }
22
23     printf("New string: %s", str);
24     return 0;
25 }
```



iuyt.cpp

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



```
C:\Users\gavin\OneDrive\Documents\iuyt.exe
Enter the number of rows: 4
1
1 2
1 2 3
1 2 3 4

-----
Process exited after 6.678 seconds with return value 0
Press any key to continue . . .
```

kjh.cpp

```
3 int main() {
4     int i, j, is_prime;
5
6     // Loop through all numbers from 1 to 100
7     for (i = 1; i <= 100; i++) {
8         // Assume the number is prime
9         is_prime = 1;
10
11        // Check if it's divisible by any number from 2 to i-1
12        for (j = 2; j < i; j++) {
13            if (i % j == 0) {
14                is_prime = 0;
15                break;
16            }
17        }
18
19        // If it's prime, print it out
20        if (is_prime && i != 1) {
21            printf("%d ", i);
22        }
23    }
24
25    return 0;
26 }
```

C:\Users\gavin\OneDrive\Documents\kjh.exe

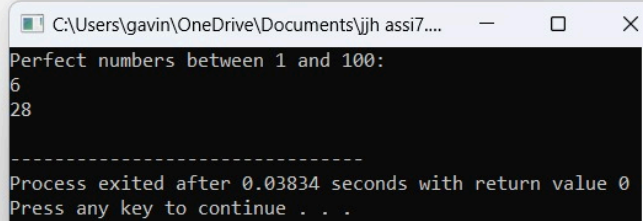
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97

-----  
Process exited after 0.03341 seconds with return value 0

Press any key to continue . . .

jjh assi7.cpp

```
1  #include <stdio.h>
2
3  int main() {
4      int i, j, sum;
5      printf("Perfect numbers between 1 and 100: \n");
6
7      for(i=1; i<=100; i++) {
8          sum = 0;
9          for(j=1; j<i; j++) {
10             if(i % j == 0) {
11                 sum += j;
12             }
13         }
14         if(sum == i) {
15             printf("%d\n", i);
16         }
17     }
18     return 0;
19 }
```



C:\Users\gavin\OneDrive\Documents\jjh assi7....

Perfect numbers between 1 and 100:  
6  
28  
-----  
Process exited after 0.03834 seconds with return value 0  
Press any key to continue . . .

jjh assi7.cpp Untitled12.cpp

```
1  #include <stdio.h>
2  #include <math.h>
3
4  int main() {
5      int num, originalNum, remainder, n = 0, result = 0;
6      for(num = 1; num <= 500; num++) {
7          originalNum = num;
8
9          // counting number of digits
10         while (originalNum != 0) {
11             originalNum /= 10;
12             ++n;
13         }
14
15         originalNum = num;
16
17         // result contains sum of nth power of individual digits
18         while (originalNum != 0) {
19             remainder = originalNum % 10;
20             result += pow(remainder, n);
21             originalNum /= 10;
22         }
23
24         // checking if number is equal to the sum of nth power of individual digits
25         if (result == num) {
26             printf("%d ", num);
27         }
28
29         // resetting values for the next iteration
30         n = 0;
31         result = 0;
32     }
33
34     return 0;
35 }
```

C:\Users\gavin\OneDrive\Documents\Untitled12.exe

```
1 2 3 4 5 6 7 8 9 153 370 371 407
-----
Process exited after 0.03446 seconds with return value 0
Press any key to continue . . .
```

jih assi7.cpp [\*] Untitled12.cpp ty.cpp Untitled14.cpp Untitled16.cpp Untitled17.cpp [\*] Untitled18.cpp Untitled19.cpp Untitled20.cpp

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

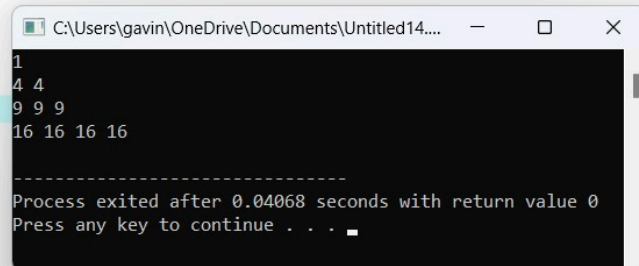
C:\Users\gavin\OneDrive\Documents\Untitled20....

```
Enter the number of rows: 4
1
2 2
3 3 3
4 4 4 4

-----
Process exited after 5.345 seconds with return value 0
Press any key to continue . . .
```



```
1  #include <stdio.h>
2
3  int main() {
4      int i, j, num = 1;
5      for(i = 1; i <= 4; i++) {
6          for(j = 1; j <= i; j++) {
7              printf("%d ", num*num);
8          }
9          printf("\n");
10         num++;
11     }
12     return 0;
13 }
```



C:\Users\gavin\OneDrive\Documents\Untitled14....

```
1
4 4
9 9 9
16 16 16 16

-----
Process exited after 0.04068 seconds with return value 0
Press any key to continue . . .
```

jjh assi7.cpp [\*] Untitled12.cpp ty.cpp Untitled14.cpp Untitled16.cpp Untitled17.cpp [\*] Untitled18.cpp Untitled19

```
1  #include <stdio.h>
2  #include <conio.h>
3  int main() {
4      int i,j,k,t=0;
5
6      for (i=1; i<=5; i++) {
7          for (k=t; k<5; k++) {
8              printf(" ");
9          }
10         for (j=0; j< i; j++) {
11             printf(" * ");
12             t = t + 1;
13         }
14         printf("\n");
15     }
16     getch();
17 }
```

