

ESE – Computer Programming

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Q 5.] Write a program to check whether entered string is palindrome or not.

Code:

```
#include <stdio.h>
#include <string.h>
int main()
{
    char s[1000];
    int i,n,c=0;
    printf("Enter the string : ");
    gets(s);
    n=strlen(s);

    for(i=0;i<n/2;i++)
    {
        if(s[i]==s[n-i-1])
            c++;

    }

    if(c==i)
        printf("string is palindrome");
    else
        printf("string is not palindrome");

    return 0;
}
```

```

9 // Question 5
10
11 #include <stdio.h>
12 #include <string.h>
13
14 int main()
15 {
16     char s[1000];
17     int i,n,c=0;
18
19     printf("Enter the string : ");
20     gets(s);
21     n=strlen(s);
22
23     for(i=0;i<n/2;i++)
24     {
25         if(s[i]==s[n-i-1])
26             c++;
27     }
28     if(c==i)
29         printf("string is palindrome");
30     else
31         printf("string is not palindrome");
32
33
34
35     return 0;
36 }
37

```

Output:

```

Enter the string : naman
string is palindrome

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

```

```

Enter the string : abcd
string is not palindrome

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

```

Q.6] Write a program to swap two numbers using call by value and call by reference.

Code:

```
#include <stdio.h>

void swapVal(int a, int b)
{
    int temp;
    temp = a;
    a=b;
    b=temp;
    printf("Numbers after swapping by call by value function:\n a=%d and b =%d\n",a,b);
}

void swapRef(int*a,int*b)
{
    int temp;
    temp =*a;
    *a=*b;
    *b=temp;
    printf("Numbers after swapping by call by reference function:\n a=%d and b=%d\n",*a,*b);
}

void main()
{
    int a,b;
    printf("Enter two Numbers:");
    scanf("%d %d",&a,&b);
    swapVal(a,b);
    printf("After returning from swap by call by value function:\n a=%d and b=%d\n",a,b);
    swapRef(&a,&b);
    printf("After returning from swap by call by reference function:\n a=%d and b=%d\n",a,b);
}
```

}

```
main.c
1
2
3 #include <stdio.h>
4 void swapVal(int a, int b)
5 {
6     int temp;
7     temp = a;
8     a=b;
9     b=temp;
10    printf("Numbers after swapping by call by value function:\n a=%d and b =%d\n",a,b);
11 }
12
13 void swapRef(int*a,int*b)
14 {
15     int temp;
16     temp =*a;
17     *a=*b;
18     *b=temp;
19     printf("Numbers after swapping by call by reference function:\n a=%d and b=%d\n",*a,*b);
20 }
21
22 void main()
23 {
24     int a,b;
25     printf("Enter two Numbers:");
26     scanf("%d %d",&a,&b);
27     swapVal(a,b);
28     printf("After returning from swap by call by value function:\n a=%d and b=%d\n",a,b);
29     swapRef(&a,&b);
30     printf("After returning from swap by call by reference function:\n a=%d and b=%d\n",a,b);
31 }
32
```

Output:

```
Enter two Numbers:5
10
Numbers after swapping by call by value function:
a=10 and b =5
After returning from swap by call by value function:
a=5 and b=10
Numbers after swapping by call by reference function:
a=10 and b=5
After returning from swap by call by reference function:
a=10 and b=5

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

Q2 Write a program using for loop to print the pattern

Code:

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int i, j;
```

```
    char c = 'P';
```

```
    for (i=0; i<6; i++)
```

```
    {
```

```
        c = 'P';
```

```
        for (j=0; j<i; j++)
```

```
        {
```

```
            printf("%c", c);
```

```
            c++;
```

```
        }
```

```
        printf("\n");
```

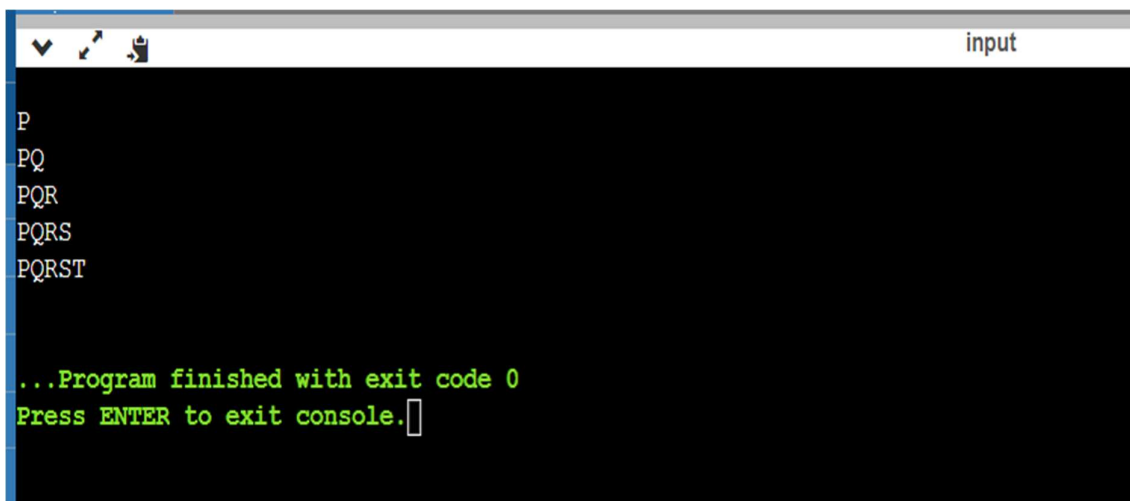
```
    }
```

```
    return 0;
```

```
}
```

```
8
9  #include <stdio.h>
10
11 int main()
12 {
13
14     int i, j;
15     char c = 'P';
16     for (i=0; i<6; i++)
17     {
18         c = 'P';
19         for (j=0; j<i; j++)
20         {
21             printf("%c", c);
22             c++;
23         }
24         printf("\n");
25     }
26     return 0;
27 }
```

Output:



input

P
PQ
PQR
PQRS
PQRST

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

Q1] This program will read a character and check whether it is digit or vowel using switch case statement.

Code:

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    char input;
```

```
    printf("Enter the character: ");
```

```
    scanf("%c", &input);
```

```
    switch(input)
```

```
    {
```

```
        case 'a':
```

```
        case 'e':
```

```
        case 'i':
```

```
        case 'o':
```

```
        case 'u':
```

```
        case 'A':
```

```
        case 'E':
```

```
        case 'I':
```

```
        case 'O':
```

```
        case 'U':
```

```
        printf("It is a vowel");
```

```
        break;
```

```
        case '1':
```

```
        case '2':
```

```
        case '3':
```

```
        case '4':
```

```
        case '5':
```

```
        case '6':
```

```
        case '7':
```



```
case '8':  
case '9':  
case '0':  
printf("It is a digit");  
break;  
default:  
printf("Invalid Input!");  
}  
return 0;  
}
```

```
1  #include <stdio.h>  
2  int main()  
3  {  
4      char input;  
5      printf("Enter the character: ");  
6      scanf("%c", &input);  
7  
8      switch(input)  
9      {  
10     case 'a':  
11     case 'e':  
12     case 'i':  
13     case 'o':  
14     case 'u':  
15     case 'A':  
16     case 'E':  
17     case 'I':  
18     case 'O':  
19     case 'U':  
20         printf("It is a vowel");  
21         break;
```

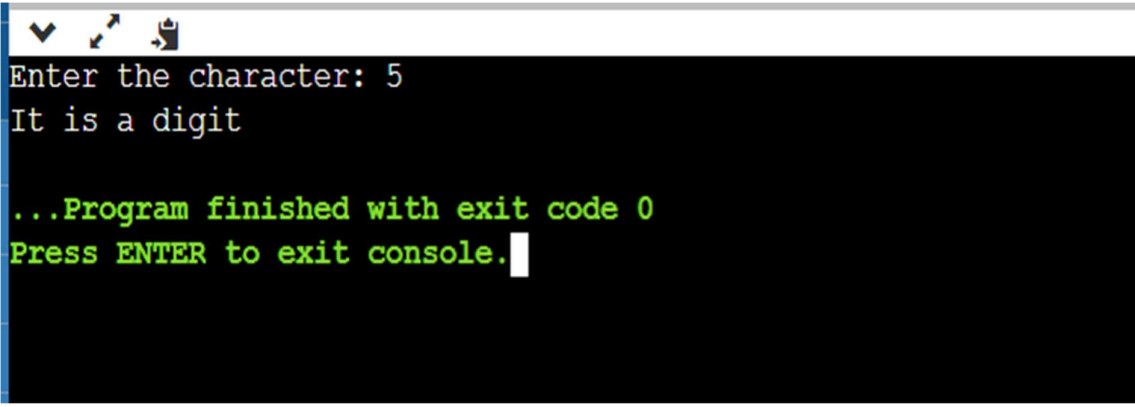
```
21     break;  
22     case '1':  
23     case '2':  
24     case '3':  
25     case '4':  
26     case '5':  
27     case '6':  
28     case '7':  
29     case '8':  
30     case '9':  
31     case '0':  
32         printf("It is a digit");  
33         break;  
34     default:  
35         printf("Invalid Input!");  
36     }  
37     return 0;  
38 }
```

Output:

A terminal window with a black background and white text. The text reads: "Enter the character: a", "It is a vowel", and "...Program finished with exit code 0". The last line is followed by "Press ENTER to exit console." with a white cursor. The window has a standard macOS title bar at the top with a red, yellow, and green button on the left and a close button on the right.

```
Enter the character: a
It is a vowel

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

A terminal window with a black background and white text. The text reads: "Enter the character: 5", "It is a digit", and "...Program finished with exit code 0". The last line is followed by "Press ENTER to exit console." with a white cursor. The window has a standard macOS title bar at the top with a red, yellow, and green button on the left and a close button on the right.

```
Enter the character: 5
It is a digit

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