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Batch: E5

Problem Statement: Write a program in C to implement string operations such as, 1. Substring, 2. Palindrome, 3. Compares, 4. Copy, 5. Reverse using pointers to arrays

INPUT CODE:

```
#include<stdio.h>
void read (char*);
void display (char*);
void substr (char*, char*);
void reverse (char*, char*);
void palindrome (char*, char*);
void compare (char*, char*);
void length (char*);
void concate (char*, char*);

void main ()
{
    printf("\n OPERATIONS ON STRING USING POINTER\n");
    printf("\n*****\n\t\tROLL
NO:22119\n*****\n");
    int c, choice;
    char a [100];
    char b[100];
    read(a);
    do
    {
        printf ("1) Display string \n");
        printf("2) Check substring \n");
        printf("3) Reverse the String\n");
        printf("4) Check palindrome \n");
        printf("5) Compare two strings \n");
```



```
printf("6) Length of string \n");
printf("7) Concatenation\n\n");
scanf ("%d", &c);
switch(c)
{
    case 1:
        display (a);
        break;
    case 2:
        substr (a, b);
        break;
    case 3:
        reverse (a, b);
        break;
    case 4:
        palindrome (a, b);
        break;
    case 5:
        compare (a, b);
        break;
    case 6:
        length(a);
        break;
    case 7:
        concate (a, b);
        break;
    default:
        printf ("Enter valid choice");
}
printf ("Press 1 to continue and 0 to stop. \n");
scanf ("%d", &choice);
printf("\n");
}
while(choice==1);
getch ();
}
```



```
void read (char *a)
{
    printf ("Enter the string :");
    gets(a);
    printf("\n");
}

void display (char *a)
{
    printf ("The string is :");
    puts(a);
    printf("\n");
}

void substr (char *a, char *b)
{
    int i=0,j=0,flag=0;
    printf ("Enter the substring :");
    scanf ("%s", b);
    while (a[i]!='\0')
    {
        if(a[i]==b[j])
        {
            i++;
            j++;
            if(b[j]=='\0')
            {
                flag=1;
                printf ("Substring is found\n");
                break;
            }
        }
        else
        {
            i++;
            j=0;
        }
    }
}
```



```
}
if(flag==0)
{
    printf("Substring not found\n");
}
printf("\n");
}
```

```
void reverse (char *a, char *b)
{
    int i, j, c=0;
    for (i=0; a[i]!='\0';i++)
    {
        c++;
    }
    for (i=c-1, j=0;i>0,j<c; i--,j++)
    {
        b[i]=a[j];
    }
    printf("Reverse of the string is :");
    puts(b);
    printf("\n");
}
```

```
void palindrome (char *a, char *b)
{
    int i, j, c=0;
    for (i=0; a[i]!='\0'; i++)
    {
        c++;
    }
    for (i=c-1, j=0; i>0, j<c; i--, j++)
    {
        b[i]=a[j];
        if(b[i]==a[i])
        {
            printf("Palindrome: YES \n");
        }
    }
}
```



```
        break;
    }
    else
    {
        printf ("Palindrome: NO \n");
        break;
    }
}
printf("\n");
}
```

```
void compare (char *a, char *b)
{
    int i;
    printf ("Enter a string to be compared:");
    scanf ("%s", b);
    for (i=0; a[i]!='\0'; i++)
    {
        if(a[i]!=b[i])
        {
            printf ("Strings are not equal.\n");
            break;
        }
        else
        {
            printf ("Strings are equal.\n");
            break;
        }
    }
    printf("\n");
}
```

```
void length (char *a)
{
    int count, i;
    for (i=1; a[i]!='\0';i++)
    {
```



```
        count++;
    }
    printf ("Length of string is: %d \n", i);
    printf("\n");
}

void concate (char *a, char *b)
{
    int i, j;
    printf ("Enter a string to be concatenated:");
    scanf ("%s", b);
    i=0, j=0;
    while(a[i]!='\0')
    {
        i++;
    }
    while(b[j]!='\0')
    {
        a[i]=b[j];
        i++;
        j++;
    }
    a[i]='\0';
    printf ("String after concatenation :%s\n", a);
}
```



OUTPUT:

```
OPERATIONS ON STRING USING POINTER

*****
ROLL NO:22119
*****
Enter the string :abcd

1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation

1
The string is :abcd

Press 1 to continue and 0 to stop.
1

1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation

2
Enter the substring :adf
Substring not found

Press 1 to continue and 0 to stop.
1

1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation

3
Reverse of the string is :dcba

Press 1 to continue and 0 to stop.
1
```



```
1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation

4
Palindrome: NO

Press 1 to continue and 0 to stop.
1

1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation

5
Enter a string to be compared:elf
Strings are not equal.

Press 1 to continue and 0 to stop.
1

1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation

6
Length of string is: 4

Press 1 to continue and 0 to stop.
1

1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation
```




```
1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation

7
Enter a string to be concatenated:beta
String after concatenation :abfdbeta
Press 1 to continue and 0 to stop.
```

OPERATIONS ON STRING USING POINTER

ROLL NO:22119

Enter the string :abcba

```
1) Display string
2) Check substring
3) Reverse the String
4) Check palindrome
5) Compare two strings
6) Length of string
7) Concatenation
```

2

Enter the substring :ba

Substring is found

Press 1 to continue and 0 to stop.

1



```
Press 1 to continue and 0 to stop.
```

```
1
```

- 1) Display string
- 2) Check substring
- 3) Reverse the String
- 4) Check palindrome
- 5) Compare two strings
- 6) Length of string
- 7) Concatenation

```
4
```

```
Palindrome: YES
```

```
Press 1 to continue and 0 to stop.
```

```
1
```

- 1) Display string
- 2) Check substring
- 3) Reverse the String
- 4) Check palindrome
- 5) Compare two strings
- 6) Length of string
- 7) Concatenation

```
5
```

```
Enter a string to be compared:abcba
```

```
Strings are equal.
```

```
Press 1 to continue and 0 to stop.
```