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## **DISTRIBUTED SYSTEMS**

### **ASSIGNMENT - 07**

Simulate RPC (Create any one procedure on remote machine and call it from local machine)

Code=>

```
struct input
{
    int choice;
    char str1[50];
    char str2[50];
    int num1;
    int num2;
    int year;
    int arr[100];
};

struct output
{
    int flag;
    int gcd;
    float sqrt;
    int num1;
    int num2;
    int max;
    int min;
    float avg;
    char str[100];
    int arr[100];
};

program EXEC_PROG{
    version EXEC_VERS{
        output exec(input)=1;
    }=1;
}=0x2f2f2f2f;
```

## CLIENT SIDE CODE =>

```
/*
 * This is sample code generated by rpcgen.
 * These are only templates and you can use them
 * as a guideline for developing your own functions.
 */

#include "birju.h"

void
exec_prog_1(char *host, int ch)
{
    CLIENT *clnt;
    output    *result_1;
    input    exec_1_arg;

#ifdef DEBUG
    clnt = clnt_create (host, EXEC_PROG, EXEC_VERS, "udp");
    if (clnt == NULL) {
        clnt_pcreateerror (host);
        exit (1);
    }
#endif /* DEBUG */

    exec_1_arg.choice=ch;

    switch (ch)
    {
    case 1:
        printf("Please enter the string : ");
        scanf("%s", exec_1_arg.str1);
        break;

    case 2:
        printf("Please enter a year : ");
        scanf("%d", &exec_1_arg.year);
        break;
    }
```

```

case 3:
    printf("Please enter first integer : ");
    scanf("%d", &exec_1_arg.num1);
    printf("Please enter second integer : ");
    scanf("%d", &exec_1_arg.num2);
    break;

case 4:
    printf("Please enter a number : ");
    scanf("%d", &exec_1_arg.num1);
    break;

case 5:
    printf("Please enter first number : ");
    scanf("%d", &exec_1_arg.num1);
    printf("Please enter second number : ");
    scanf("%d", &exec_1_arg.num2);
    printf("Values before swap are : %d %d\n", exec_1_arg.num1,
exec_1_arg.num2);
    break;

case 6:
    printf("Please enter number of elements : ");
    scanf("%d", &exec_1_arg.year);
    printf("Please enter %d elements : ", exec_1_arg.year);
    for(int i = 0 ; i < exec_1_arg.year && i < 20; i++)
    {
        scanf("%d", &exec_1_arg.arr[i]);
    }
    break;

case 7:
    printf("Please enter first string : ");
    scanf("%s", exec_1_arg.str1);
    printf("Please enter second string : ");
    scanf("%s", exec_1_arg.str2);
    break;

case 8:
    printf("Please enter first string : ");

```

```

        scanf("%s", exec_1_arg.str1);
        printf("Please enter second string : ");
        scanf("%s", exec_1_arg.str2);
        break;

    case 9:
        printf("Please enter first string : ");
        scanf("%s", exec_1_arg.str1);
        printf("Please enter second string : ");
        scanf("%s", exec_1_arg.str2);
        break;

    case 10:
        printf("Please enter number of elements : ");
        scanf("%d", &exec_1_arg.year);
        printf("Please enter %d elements : ", exec_1_arg.year);
        for(int i = 0 ; i < exec_1_arg.year ; i++)
        {
            scanf("%d", &exec_1_arg.arr[i]);
        }
        break;

    default:
        printf("Please enter a valid choice!!\n");
        return;
        break;
}

result_1 = exec_1(&exec_1_arg, clnt);
if (result_1 == (output *) NULL) {
    clnt_perror (clnt, "call failed");
}

switch (ch)
{
    case 1:
        if(result_1->flag)
            printf("%s is Palindrome!!\n", exec_1_arg.str1);
        else

```

```

        printf("%s is not a Palindrome!!\n", exec_1_arg.str1);
        break;
    case 2:
        if(result_1->flag)
            printf("%d is a LEAP!!\n", exec_1_arg.year);
        else
            printf("%d is not LEAP!!\n", exec_1_arg.year);
        break;
    case 3:
        printf("GCD(%d,%d) : %d\n", exec_1_arg.num1, exec_1_arg.num2,
result_1->gcd);
        break;
    case 4:
        printf("Square root of %d : %f\n",
exec_1_arg.num1,result_1->sqr);
        break;
    case 5:
        printf("Values after swap are : %d %d\n", result_1->num1,
result_1->num2);
        break;
    case 6:
        printf("Maximum value in array : %d", result_1->max);
        printf("\nMinimum Value in array : %d", result_1->min);
        printf("\nAverage of all the values : %f\n", result_1->avg);
        break;
    case 7:
        if(result_1->flag > 0)
            printf("'s' is greater than 's'!!\n", exec_1_arg.str1,
exec_1_arg.str2);
        else if(result_1->flag == 0)
            printf("Both strings are same!!\n");
        else
            printf("'s' is greater than 's'!!\n", exec_1_arg.str2,
exec_1_arg.str1);
        break;
    case 8:
        if(result_1->flag)
            printf("%s string is substring of %s!!\n", exec_1_arg.str2,
exec_1_arg.str1);

```

```

        else
            printf("%s string is not substring of %s!!\n",
exec_1_arg.str2, exec_1_arg.str1);
        break;
    case 9:
        printf("Concatenated string : %s\n", result_1->str);
        break;
    case 10:
        printf("Reverse of array : ");
        for(int i = 0 ; i < exec_1_arg.year ; i++)
            printf("%d ", result_1->arr[i]);
        printf("\n");
        break;
    default:
        printf("Bye Bye!!\n");
        return;
        break;
}

```

```

#ifdef DEBUG
    clnt_destroy (clnt);
#endif /* DEBUG */
}

```

```

int
main (int argc, char *argv[])
{
    char *host;

    if (argc < 2) {
        printf ("usage: %s server_host\n", argv[0]);
        exit (1);
    }
    host = argv[1];
    int ch;
    char op='y';
    while (op=='y')
    {

```

```
    system("clear");
    printf("1   : To check if a string is palindrome.\n");
    printf("2   : Find if a year is leap.\n");
    printf("3   : find gcd of two number.\n");
    printf("4   : find square root of a given number.\n");
    printf("5   : Swap two variables without third variable.\n");
    printf("6   : Calculate maximum, minimum and average.\n");
    printf("7   : Compare two strings.\n");
    printf("8   : Find whether a second string is substring.\n");
    printf("9   : Concatenate two strings.\n");
    printf("10  : Reverse elements of array.\n");
    printf("Please enter your choice : ");
    scanf("%d", &ch);
    exec_prog_1 (host,ch);
    printf("Do you want to continue? (y/n) : ");
    scanf("%s", &op);
}

printf("Hope you liked our service!!\n");
exit (0);
}
```

## SERVER SIDE CODE=>

```
/*
 * This is sample code generated by rpcgen.
 * These are only templates and you can use them
 * as a guideline for developing your own functions.
 */

#include "birju.h"
#include <string.h>

int isPalindrome(char str[])
{
    int l=0;
    int h = strlen(str)-1;
    while (h>l)
    {
        if (str[l++] != str[h--])
            return 0;
    }
    return 1;
}

int isLeap(int year)
{
    if(year%400==0 || (year%100!=0 && year%4 == 0))
        return 1;
    return 0;
}

int gcd1(int a, int b)
{
    if(a==0)
        return b;
    return gcd1(b%a,a);
}

int isSubstr(char *str1,char *str2)
{

```



```

    int i=0,j;
    int n1=strlen(str1);
    int n2=strlen(str2);
    int flag;
    for (i = 0; i <= n1 - n2; i++)
    {
        for (j = i; j < i + n2; j++)
        {
            flag = 1;
            if (str1[j] != str2[j - i])
            {
                flag = 0;
                break;
            }
        }
        if (flag == 1)
            break;
    }
    return flag;
}

float findsqrt(float number)
{
    float temp, sq_rt;
    sq_rt = number / 2;
    temp = 0;
    while(sq_rt != temp){
        temp = sq_rt;
        sq_rt = ( number/temp + temp) / 2;
    }
    return sq_rt;
}

output *
exec_1_svc(input *argp, struct svc_req *rqstp)
{
    static output result;

    int ch = argp->choice;

```

```

switch (ch)
{
case 1:
    result.flag = isPalindrome(argp->str1);
    if(result.flag)
        printf("%s is Palindrome!!\n", argp->str1);
    else
        printf("%s is not a Palindrome!!\n", argp->str1);
    break;
case 2:
    result.flag = isLeap(argp->year);
    if(result.flag)
        printf("%d is a LEAP!!\n", argp->year);
    else
        printf("%d is not a LEAP!!\n", argp->year);
    break;
case 3:
    result.gcd = gcd1(argp->num1, argp->num2);
    printf("GCD[%d,%d] : %d\n", argp->num1, argp->num2, result.gcd);
    break;
case 4:
    result.sqrt = findsqrt(argp->num1);
    printf("Square root of %d : %f\n", argp->num1, result.sqrt);
    break;
case 5:
    result.num1 = argp->num2;
    result.num2 = argp->num1;
    printf("Numebers swapped successfully!!\n");
    break;
case 6:
    result.min = argp->arr[0];
    result.max = argp->arr[0];
    result.avg = argp->arr[0];
    for(int i = 1 ; i < argp->year ; i++)
    {
        if(result.max < argp->arr[i])
            result.max = argp->arr[i];
        if(result.min > argp->arr[i])
            result.min = argp->arr[i];
    }
}

```

```

        result.avg+=argp->arr[i];
    }
    result.avg/=argp->year;
    printf("MAX : %d", result.max);
    printf("\nMIN : %d", result.min);
    printf("\nAVG : %f\n", result.avg);
    break;
case 7:
    result.flag = strcmp(argp->str1, argp->str2);
    if(result.flag > 0)
        printf("%s > %s\n", argp->str1, argp->str2);
    else if(result.flag == 0)
        printf("%s = %s\n", argp->str1, argp->str2);
    else
        printf("%s < %s\n", argp->str1, argp->str2);
    break;
case 8:
    result.flag = isSubstr(argp->str1, argp->str2);
    if(result.flag)
        printf("%s is substring of %s\n", argp->str2, argp->str1);
    else
        printf("%s is not substring of %s\n", argp->str2,
argp->str1);
    break;
case 9:
    strcpy(result.str, "");
    strcat(result.str, argp->str1);
    strcat(result.str, argp->str2);
    printf("Concatenated string : %s\n", result.str);
    break;
case 10:
    printf("Original array : ");
    for(int i = 0 ; i < argp->year ; i++)
    {
        printf("%d ", argp->arr[i]);
    }
    printf("\n");
    for(int i = 0 ; i < argp->year ; i++)
    {

```

```
        result.arr[i] = argp->arr[argp->year-1-i];
    }
    printf("Reverse array is : ");
    for(int i = 0 ; i < argp->year ; i++)
    {
        printf("%d ",result.arr[i]);
    }
    printf("\n");
    break;
default:
    printf("Invalid input!!\n");
    break;
}
return &result;
}
```

## 1. String is palindrome or not.

```
Activities Tilix Mar 22
1 / 1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh@brijesh-VirtualBox:~/Documents/ds-assign07$ ./birju_server
brijesh is not a Palindrome!!

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 1
Please enter the string : brijesh
brijesh is not a Palindrome!!
Do you want to continue? (y/n) : y
```

```
1 / 1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh@brijesh-VirtualBox:~/Documents/ds-assign07$ ./birju_server
brijesh is not a Palindrome!!
brirb is Palindrome!!

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 1
Please enter the string : brirb
brirb is Palindrome!!
Do you want to continue? (y/n) : y
```

## 2. Find out if a given year is a Lear Year or not.

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh@brijesh-VirtualBox:~/Documents/ds-assign07$ ./birju_server
brijesh is not a Palindrome!!
brirb is Palindrome!!
2000 is a LEAP!!
█

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 2
Please enter a year : 2000
2000 is a LEAP!!
Do you want to continue? (y/n) : █
```

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh@brijesh-VirtualBox:~/Documents/ds-assign07$ ./birju_server
brijesh is not a Palindrome!!
brirb is Palindrome!!
2000 is a LEAP!!
1700 is not a LEAP!!
█

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 2
Please enter a year : 1700
1700 is not LEAP!!
Do you want to continue? (y/n) : y█
```

### 3. Find out the GCD of a given number.

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh@brijesh-VirtualBox:~/Documents/ds-assign07$ ./birju_server
brijesh is not a Palindrome!!
brirb is Palindrome!!
2000 is a LEAP!!
1700 is not a LEAP!!
GCD[11,13] : 1

```

```
2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 3
Please enter first integer : 11
Please enter second integer : 13
GCD(11,13) : 1
Do you want to continue? (y/n) : y
```

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh@brijesh-VirtualBox:~/Documents/ds-assign07$ ./birju_server
brijesh is not a Palindrome!!
brirb is Palindrome!!
2000 is a LEAP!!
1700 is not a LEAP!!
GCD[11,13] : 1
GCD[12,8] : 4

```

```
2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 3
Please enter first integer : 12
Please enter second integer : 8
GCD(12,8) : 4
Do you want to continue? (y/n) : y
```

#### 4. Find out the Square root of a given number.

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh@brijesh-VirtualBox:~/Documents/ds-assign07$ ./birju_server
brijesh is not a Palindrome!!
brirb is Palindrome!!
2000 is a LEAP!!
1700 is not a LEAP!!
GCD[11,13] : 1
GCD[12,8] : 4
Square root of 100 : 10.000000

```

```
2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 4
Please enter a number : 100
Square root of 100 : 10.000000
Do you want to continue? (y/n) : y
```

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brirb is Palindrome!!
2000 is a LEAP!!
1700 is not a LEAP!!
GCD[11,13] : 1
GCD[12,8] : 4
Square root of 100 : 10.000000
Square root of 100 : 10.000000
Square root of 125 : 11.180340

```

```
2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 4
Please enter a number : 125
Square root of 125 : 11.180340
Do you want to continue? (y/n) :
```



## 5. Swap two variables without using the 3rd variable.

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh@brijesh-VirtualBox:~/Documents/ds-assign07$ ./birju_server
brijesh is not a Palindrome!!
brirb is Palindrome!!
2000 is a LEAP!!
1700 is not a LEAP!!
GCD[11,13] : 1
GCD[12,8] : 4
Square root of 100 : 10.000000
Square root of 100 : 10.000000
Square root of 125 : 11.180340
Numebers swapped successfully!!

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 5
Please enter first number : 12
Please enter second number : 13
Values before swap are : 12 13
Values after swap are : 13 12
Do you want to continue? (y/n) : 
```

## 6. Calculate Maximum, Minimum, average of given array.

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
brijesh is not a Palindrome!!
brirb is Palindrome!!
2000 is a LEAP!!
1700 is not a LEAP!!
GCD[11,13] : 1
GCD[12,8] : 4
Square root of 100 : 10.000000
Square root of 100 : 10.000000
Square root of 125 : 11.180340
Numbers swapped successfully!!
MAX : 5
MIN : 1
AVG : 3.000000
█

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, minimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 6
Please enter number of elements : 5
Please enter 5 elements : 1 2 3 4 5
Maximum value in array : 5
Minimum Value in array : 1
Average of all the values : 3.000000
Do you want to continue? (y/n) : █
```

## 7. Compare the given two strings.

```
1 / 1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
Square root of 100 : 10.000000
Square root of 100 : 10.000000
Square root of 125 : 11.180340
Numebers swapped successfully!!
MAX : 5
MIN : 1
AVG : 3.000000
MAX : 5
MIN : 5
AVG : 5.000000
brijesh < neha
neha > brijesh
neha = neha
█

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 7
Please enter first string : neha
Please enter second string : neha
Both strings are same!!
Do you want to continue? (y/n) : █
```

## 8. Find out whether a given string is substring or not.

```
1 / 1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
Square root of 125 : 11.180340
Numebers swapped successfully!!
MAX : 5
MIN : 1
AVG : 3.000000
MAX : 5
MIN : 5
AVG : 5.000000
brijesh < neha
neha > brijesh
neha = neha
rohit is substring of brijeshrohit
birju is not substring of brijesh

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, mminimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 8
Please enter first string : brijesh
Please enter second string : birju
birju string is not substring of brijesh!!
Do you want to continue? (y/n) :
```

## 9. Concatenate the two strings.

```
1/1 + ...ix: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
Numbers swapped successfully!!
MAX : 5
MIN : 1
AVG : 3.000000
MAX : 5
MIN : 5
AVG : 5.000000
brijesh < neha
neha > brijesh
neha = neha
rohit is substring of brijeshrohit
birju is not substring of brijesh
Concatenated string : brijeshrohit

2: brijesh@brijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, minimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 9
Please enter first string : brijesh
Please enter second string : rohit
Concatenated string : brijeshrohit
Do you want to continue? (y/n) :
```

## 10. Reverse the elements of an array.

```
Activities Tilix Mar 20
1 / 1 + ...ix: bijesh@bijesh-VirtualBox: ~/Documents/ds-assign07
1: bijesh@bijesh-VirtualBox: ~/Documents/ds-assign07
MIN : 1
AVG : 3.000000
MAX : 5
MIN : 5
AVG : 5.000000
bijesh < neha
neha > bijesh
neha = neha
rohit is substring of bijeshrohit
birju is not substring of bijesh
Concatenated string : bijeshrohit
Original array : 1 2 3 4 5
Reverse array is : 5 4 3 2 1
█

2: bijesh@bijesh-VirtualBox: ~/Documents/ds-assign07
1 : To check if a string is palindrome.
2 : Find if a year is leap.
3 : find gcd of two number.
4 : find square root of a given number.
5 : Swap two variables without third variable.
6 : Calculate maximum, minimum and average.
7 : Compare two strings.
8 : Find whether a second string is substring.
9 : Concatenate two strings.
10 : Reverse elements of array.
Please enter your choice : 10
Please enter number of elements : 5
Please enter 5 elements : 1 2 3 4 5
Reverse of array : 5 4 3 2 1
Do you want to continue? (y/n) : █
```