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DATE:29/03/22

C programming lab

Assignment_Four_(1)

LA4.1 WAP to print your name 5 times using a while loop.

LA4.2 WAP to input any integer and print your name that many times.

LA4.3 WAP to print the series as 1 2 3 4 5 6 7100.

LA4.4 WAP to print the series as 1 3 7 15 31n, where n is given by

user.

LA4.5 WAP to print the series as 1 1 2 3 5 8 13n, where n is given

user.

LA4.6 WAP to print the series as 3 5 7 11 13 17.....n, where n is given

by user.

LA4.7 WAP to print all odd and even numbers separately within a given range.The range is input through the user.

HA4.1 WAP to check whether an input integer is a strong number or not.
(Hint: If the sum of factorials of all digits of a number are equal to the

number are equal to the number, it is called a strong number)

HA4.2 WAP to find out the prime factors of a number entered through keyboard

(distinct).

/*Hints: A prime number is any number with no divisors other than itself and

1, such as 2 and 5. Any number can be written as a product of prime numbers

in a unique way (except for the order). These are called prime factors of a

number. In other words, In number theory, the prime factors of a positive

integer are the prime numbers that divide that integer exactly, without

leaving a remainder. The process of finding these numbers is called integer

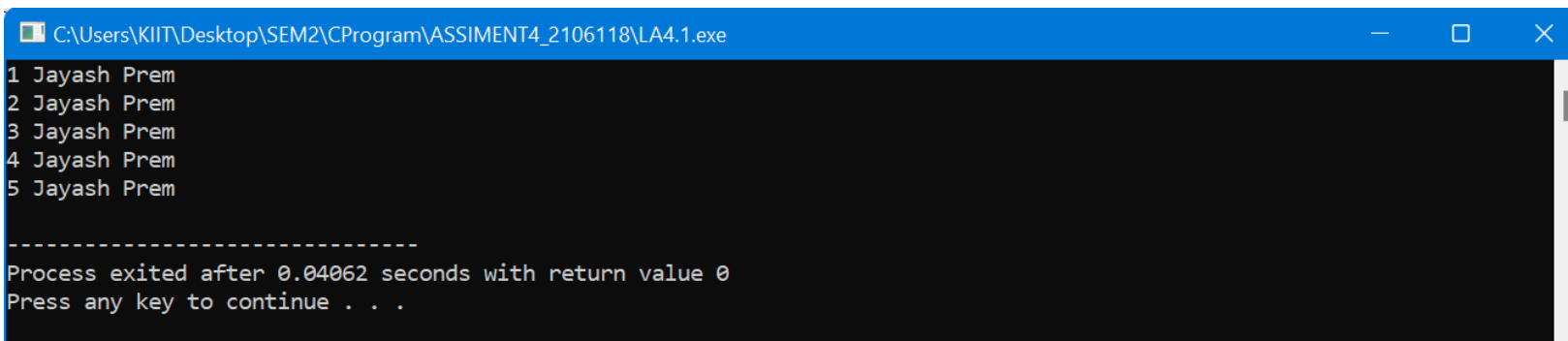
factorization, or prime factorization.

- Enter a number : 100
- The prime factors of 100 are 2(2) and 5(2)
- That is, $100 = 2 \times 2 \times 5 \times 5$, and those numbers are primes. */

LA4.1 WAP to print your name 5 times using a while loop.

```
/*
Jayash prem 2106118
program:LA4.1 WAP to print your name 5 times using a
while loop.
Date:23/03/22
*/
#include<stdio.h>
int main()
{

    int i=1;
    while(i<=5)
    {
        printf("%d Jayash Prem\n",i);
        i=i+1;
    }
    return 0;
}
```

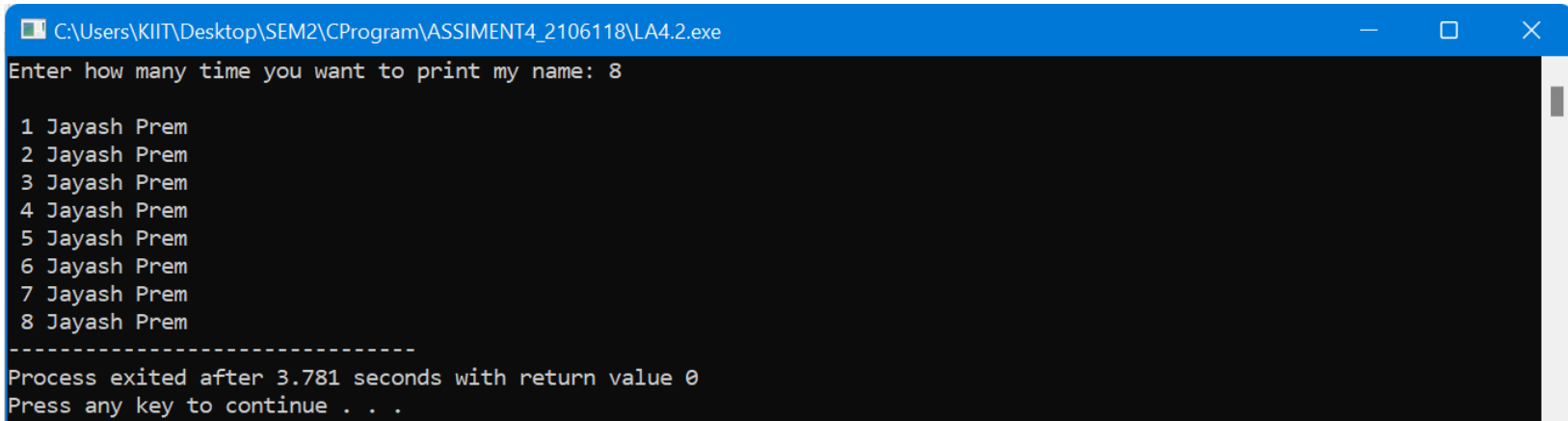


```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.1.exe
1 Jayash Prem
2 Jayash Prem
3 Jayash Prem
4 Jayash Prem
5 Jayash Prem

-----
Process exited after 0.04062 seconds with return value 0
Press any key to continue . . .
```

LA4.2 WAP to input any integer and print your name that many times.

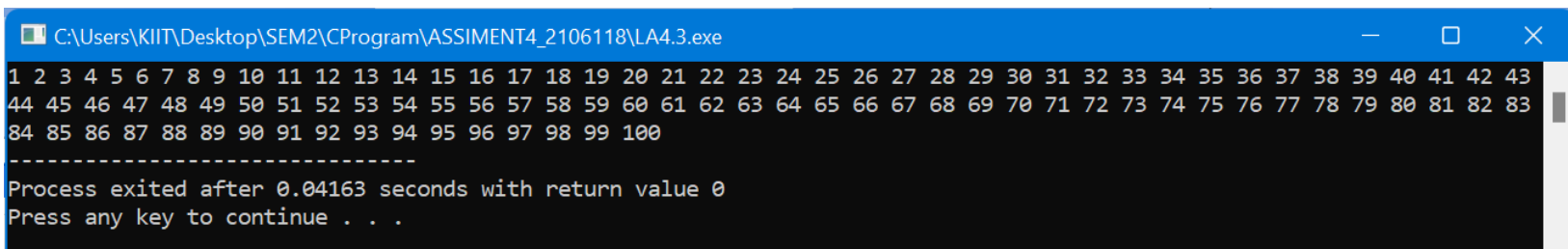
```
/*  
Jayash prem 2106118  
program:LA4.2 WAP to input any integer and print your name  
that many times.  
Date:23/03/22  
*/  
#include<stdio.h>  
int main()  
{  
  
    int i,c;  
    printf("Enter how many time you want to print my name: ");  
    scanf("%d",&c);  
    for(i=1;i<=c;i++)  
        printf("\n %d Jayash Prem",i);  
    return 0;  
}
```



```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.2.exe  
Enter how many time you want to print my name: 8  
  
1 Jayash Prem  
2 Jayash Prem  
3 Jayash Prem  
4 Jayash Prem  
5 Jayash Prem  
6 Jayash Prem  
7 Jayash Prem  
8 Jayash Prem  
-----  
Process exited after 3.781 seconds with return value 0  
Press any key to continue . . .
```

LA4.3 WAP to print the series as 1 2 3 4 5 6 7.....100

```
/*  
Jayash prem 2106118  
program:LA4.3 WAP to print the series as 1 2 3 4 5 6 7  
.....100.  
Date:23/03/22  
*/  
#include<stdio.h>  
int main()  
{  
    int i;  
    for(i=1;i<=100;i++)  
        printf("%d ",i);  
    return 0;  
}
```



```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.3.exe  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43  
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83  
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100  
-----  
Process exited after 0.04163 seconds with return value 0  
Press any key to continue . . .
```

LA4.4 WAP to print the series as 1 3 7 15 31n, where n is given by the user.

/*

Jayash prem 2106118

program:LA4.4 WAP to print the series as 1 3 7 15 31n, where n is given by the user.

Date:23/03/22

*/

#include<stdio.h>

int main()

{

int i,n;

printf("Enter the value of n: ");

scanf(" %d",&n);

for(i=2;i<=n;i=i*2)

printf(" %d ",i-1);

return 0;

}

C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.4.exe

Enter the value of n: 290

1 3 7 15 31 63 127 255

Process exited after 3.053 seconds with return value 0

Press any key to continue . . .

**LA4.5 WAP to print the series as 1 1 2 3 5 8
13n, where n is given to the user.**

/*

Jayash prem 2106118

program:LA4.5 WAP to print the series as 1 1 2 3 5 8
13n, where n is given to the user.

Date:23/03/22

*/

#include<stdio.h>

int main()

{

int i,n,a,b,c;

printf("Enter the value of n: ");

scanf(" %d",&n);

a=-1;b=1;c=a+b;

while(c<=n)

{

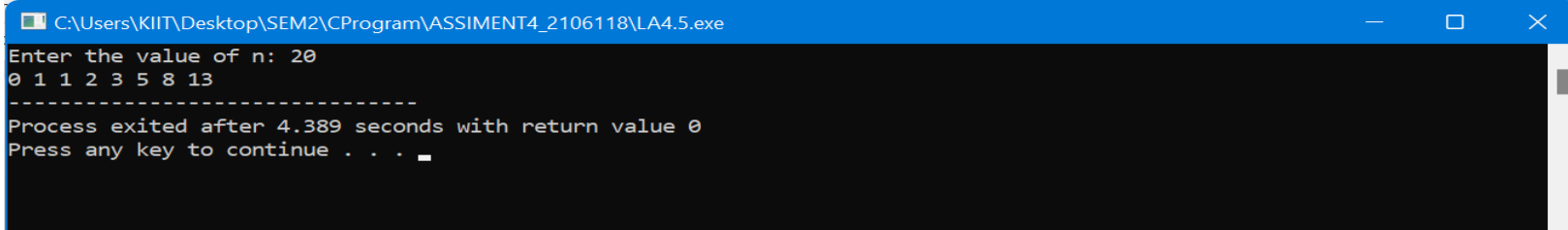
printf("%d ",c);

a=b;b=c;c=a+b;

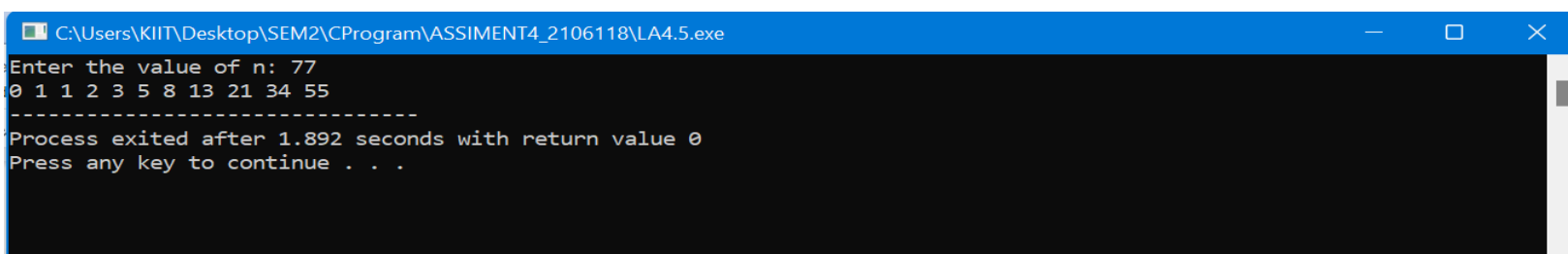
}

return 0;

}



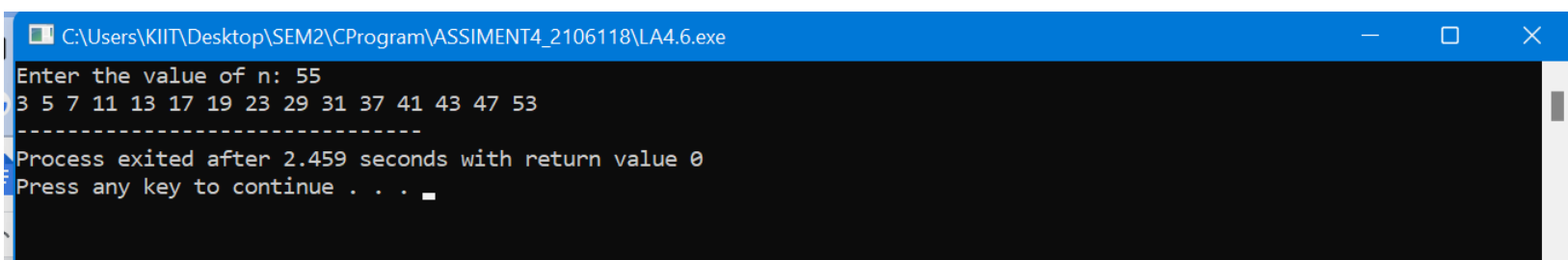
```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.5.exe
Enter the value of n: 20
0 1 1 2 3 5 8 13
-----
Process exited after 4.389 seconds with return value 0
Press any key to continue . . .
```



```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.5.exe
Enter the value of n: 77
0 1 1 2 3 5 8 13 21 34 55
-----
Process exited after 1.892 seconds with return value 0
Press any key to continue . . .
```

program:LA4.6 WAP to print the series as 3 5 7 11 13 17.....n, where n is given by the user.

```
/*
Jayash prem 2106118
program:LA4.6 WAP to print the series as 3 5 7 11 13 17.....n,
where n is given by the user.
Date:23/03/22
*/
#include<stdio.h>
int main()
{
    int i,n,a,c,j;
    printf("Enter the value of n: ");
    scanf(" %d",&n);
    for(i=3;i<=n;i++)
    {
        c=0;
        for(j=1;j<=i;j++)
        {
            if(i%j==0)
                c=c+1;
        }
        if(c==2)
            printf("%d ",i);
    }
    return 0;
}
```



The screenshot shows a Windows command prompt window with a blue title bar. The title bar text is "C:\Users\KILT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.6.exe". The command prompt has a black background with white text. It shows the user entering "55" in response to the prompt "Enter the value of n:". The program then prints the series "3 5 7 11 13 17 19 23 29 31 37 41 43 47 53". Below the series, it says "Process exited after 2.459 seconds with return value 0" and "Press any key to continue . . .".

```
C:\Users\KILT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.6.exe
Enter the value of n: 55
3 5 7 11 13 17 19 23 29 31 37 41 43 47 53
-----
Process exited after 2.459 seconds with return value 0
Press any key to continue . . .
```

program:LA4.7 WAP to print all odd and even numbers separately within a given range.The range is input through the user.

```
/*
Jayash prem 2106118
program:LA4.7 WAP to print all odd and even numbers separately within a
given range.The range is input through the user.
Date:23/03/22
*/
#include<stdio.h>
int main()
{
    int i,a,b;
    printf("Enter the range : ");
    printf("MIN: ");
    scanf(" %d",&a);
    printf("MAX: ");
    scanf(" %d",&b);
    printf("\nEVEN NUMBER BETWEEN %d - %d :\n",a,b);
    for(i=a;i<=b;i+=1)
        if(i%2==0)
            printf("%d ",i);
    printf("\nODD NUMBER BETWEEN %d - %d :\n",a,b);
    for(i=a;i<=b;i+=1)
        if(i%2!=0)
            printf("%d ",i);
    return 0;
}
```



```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.7.exe
Enter the range : MIN: 8
MAX: 89

EVEN NUMBER BETWEEN 8 - 89 :
8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88
ODD NUMBER BETWEEN 8 - 89 :
9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89
-----
Process exited after 7.465 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\LA4.7.exe
Enter the range : MIN: 44
MAX: 220

EVEN NUMBER BETWEEN 44 - 220 :
44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100 102 104 106 108 110 112 114 116 118 120 122 124 126 128 130 132 134 136 138 140 142
144 146 148 150 152 154 156 158 160 162 164 166 168 170 172 174 176 178 180 182 184 186 188 190 192 194 196 198 200 202 204 206 208 210 212 214 216 218 220
ODD NUMBER BETWEEN 44 - 220 :
45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99 101 103 105 107 109 111 113 115 117 119 121 123 125 127 129 131 133 135 137 139 141 143
145 147 149 151 153 155 157 159 161 163 165 167 169 171 173 175 177 179 181 183 185 187 189 191 193 195 197 199 201 203 205 207 209 211 213 215 217 219
-----
Process exited after 7.579 seconds with return value 0
Press any key to continue . . .
```

HA4.1 WAP to check whether an input integer is a strong number or not.
(Hint: If the sum of factorials of all digits of a number are equal to the number are equal to the number, it is called a strong number)

/*

Jayash prem 2106118

program:HA4.1 WAP to check whether an input integer is a strong number or not.

(Hint: If the sum of factorials of all digits of a number are equal to the number are equal to the number, it is called a strong number)

Date:23/03/22

*/

```

#include<stdio.h>
int main()
{
    int n,i,fact,digit,sum,temp;
    printf("ENTER A NUMBER: ");
    scanf("%d",&n);
    temp=n;
    while(n>0)
    {
        digit=n%10;
        fact=1;
        for(i=1;i<=digit;i=i+1)
            fact=fact*i;
        sum=sum+fact;
        n=n/10;
    }
    if(sum==temp)
        printf("%d is a strong number:",temp);
    else
        printf("%d is not a strong number:",temp);
    return 0;
}

```

```

C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\HA4.1.exe
ENTER A NUMBER: 57
57 is not a strong number:
-----
Process exited after 5.424 seconds with return value 0
Press any key to continue . . .

```

```

C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\HA4.1.exe
ENTER A NUMBER: 145
145 is a strong number!
-----
Process exited after 2.403 seconds with return value 0
Press any key to continue . . .

```

WAP to find out the prime factors of a number entered through keyboard (distinct).

```
/*
JAYASH PREM
2106118
PROGRAM:prime factors of a number entered through keyboard
*/
#include<stdio.h>
int main()
{
    int n,i,j,c;
    printf("Enter the number: ");
    scanf("%d",&n);
    printf("Prime Factors: ");
    while(n>0)
    {
        for(i=1;i<=n;i++)
        {
            if(n%i==0)
            {
                c=0;
                for(j=1;j<=i;j++)
                if(i%j==0)
                c+=1;
                if(c==2)
                {
                    printf("%d ",i);
                    n=n/i;
                }
            }
        }
        i=1;
    }
    return 0;
}
```

```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\HA4.2.exe
Enter the number: 675
Prime Factors: 3 3 3 5 5
```

```
C:\Users\KIIT\Desktop\SEM2\CProgram\ASSIMENT4_2106118\HA4.2.exe
Enter the number: 78
Prime Factors: 2 3 13
```

*****END*****