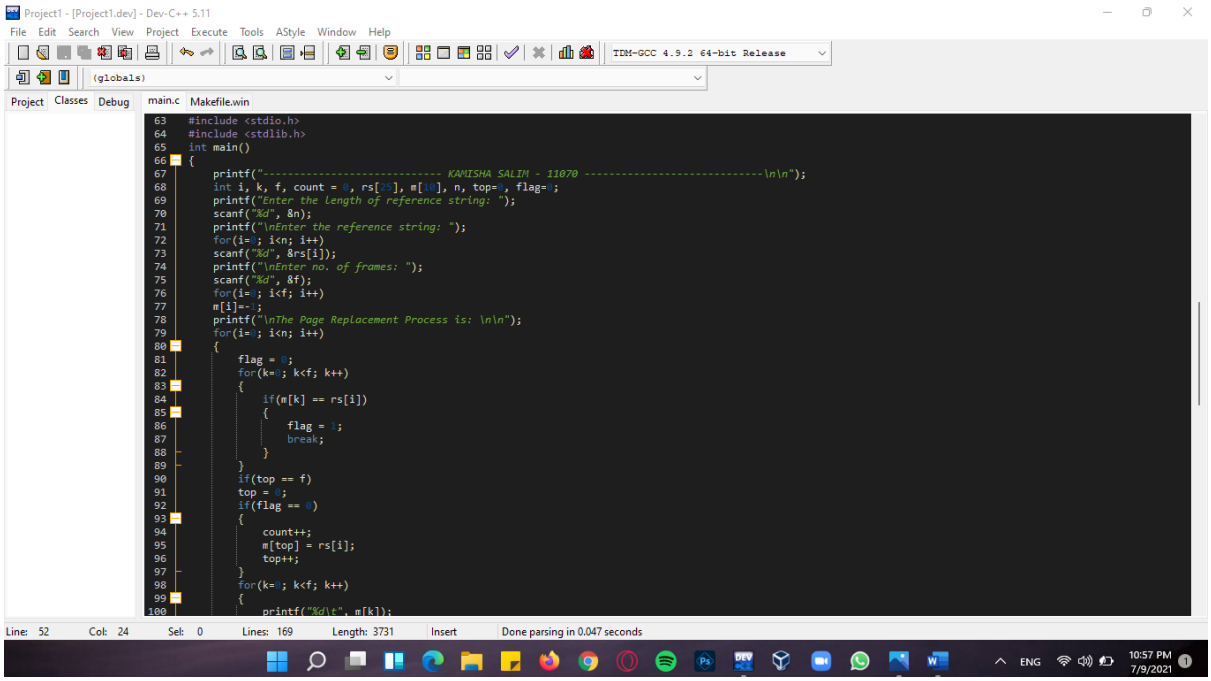
OPERATING SYSTEMS
LAB TASK – 11

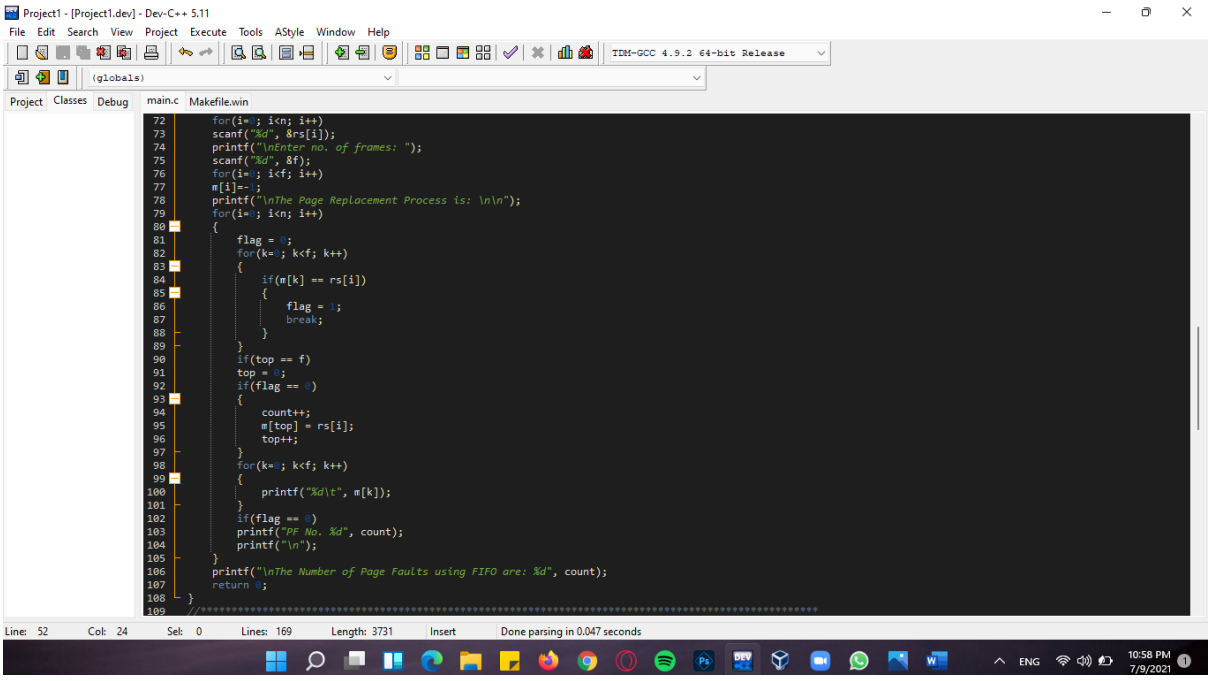
Name: Kamisha Salim
S.ID: 11070

QUESTION – 1

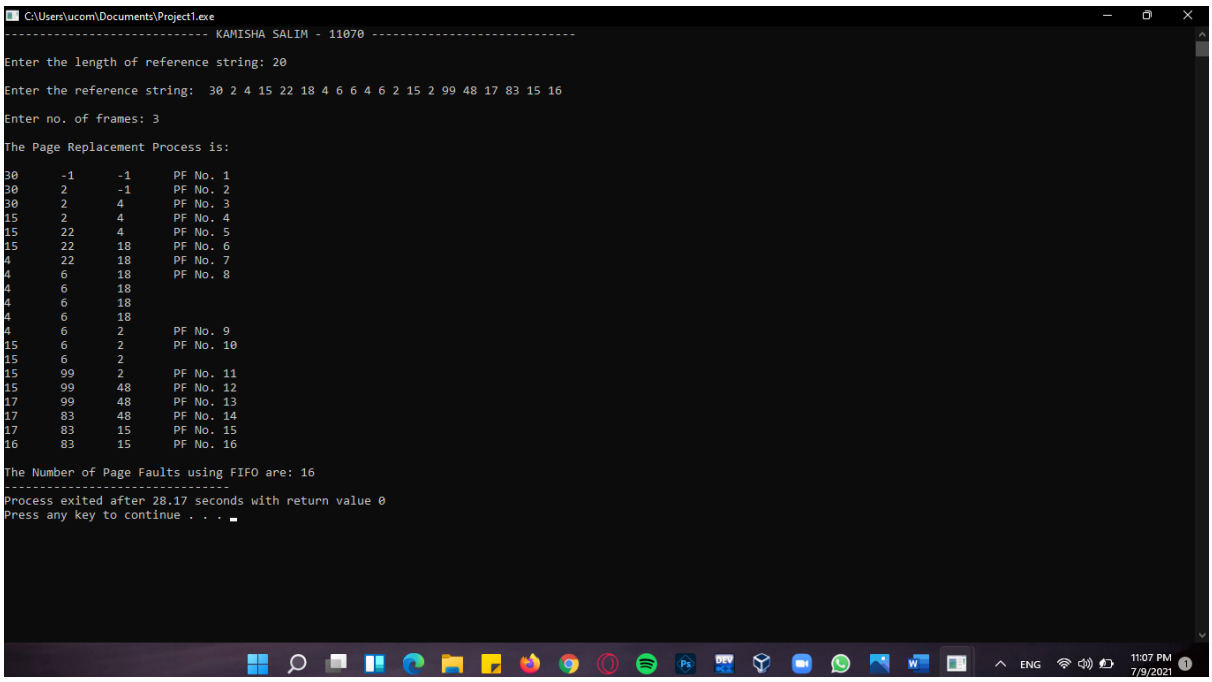
CODE:

USING FIRST IN FIRST OUT (FIFO)





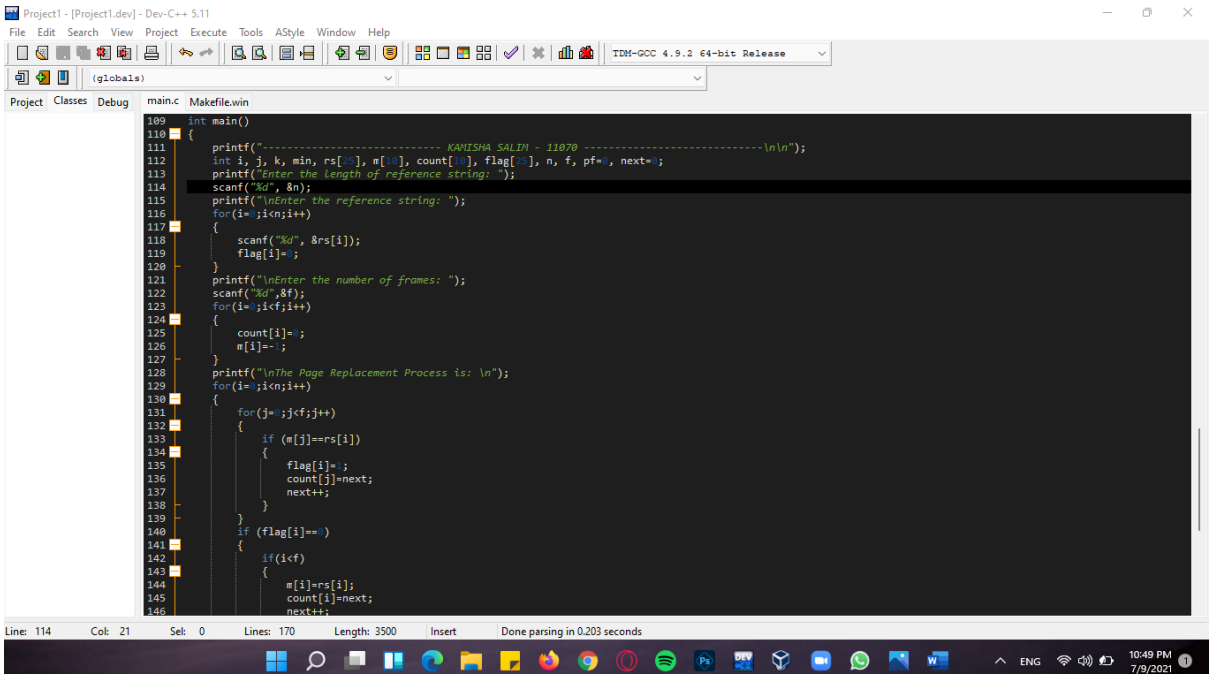
OUTPUT:


C:\Users\ucom\Documents\Project1.exe
---------- KAMISHA SALIM - 11070 ----------
Enter the length of reference string: 20
Enter the reference string: 30 2 4 15 22 18 4 6 6 4 6 2 15 2 99 48 17 83 15 16
Enter no. of frames: 3
The Page Replacement Process is:
30 -1 -1 PF No. 1
30 2 -1 PF No. 2
30 2 4 PF No. 3
15 2 4 PF No. 4
15 22 4 PF No. 5
15 22 18 PF No. 6
4 22 18 PF No. 7
4 6 18 PF No. 8
4 6 18
4 6 18
4 6 18
4 6 2 PF No. 9
15 6 2 PF No. 10
15 6 2
15 99 2 PF No. 11
15 99 48 PF No. 12
17 99 48 PF No. 13
17 83 48 PF No. 14
17 83 15 PF No. 15
16 83 15 PF No. 16
The Number of Page Faults using FIFO are: 16
Process exited after 28.17 seconds with return value 0
Press any key to continue . . .
ENG
11:07 PM
7/9/2021

QUESTION – 2

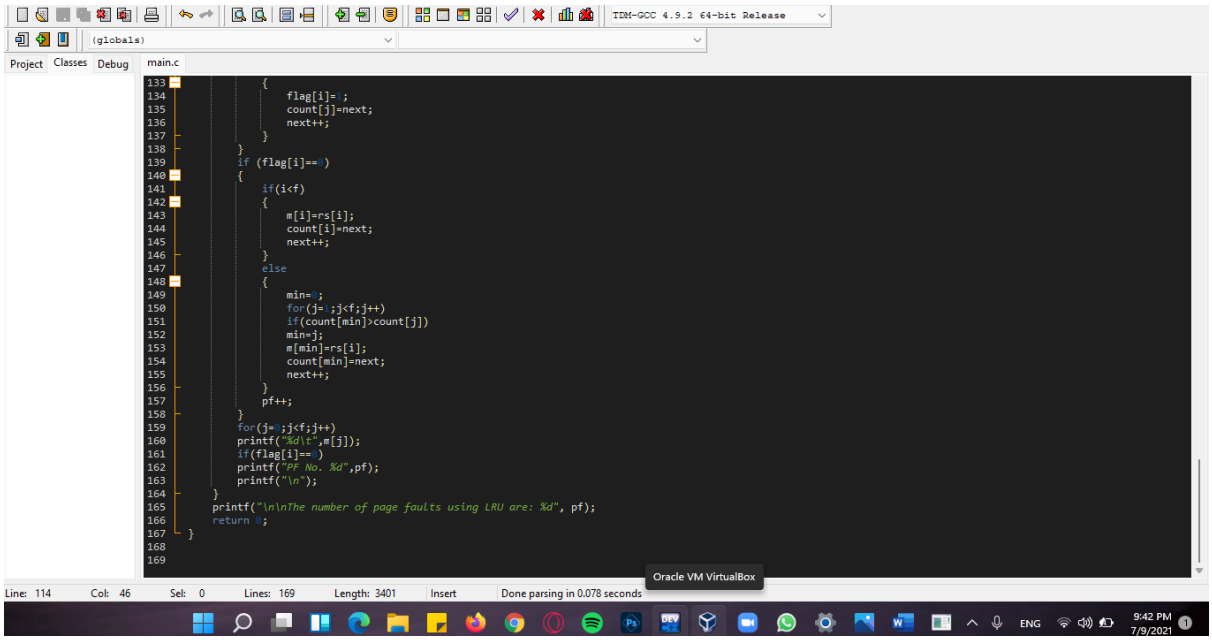
CODE:

USING LEAST RECENTLY USED (LRU)



```
int main()
{
    printf("---------------------------- KAMISHA SALIM - 11070 ----------------------------\n\n");
    int i, j, k, min, rs[25], m[10], count[10], flag[25], n, f, pf=0, next=0;
    printf("Enter the Length of reference string: ");
    scanf("%d", &n);
    printf("\nEnter the reference string: ");
    for(i=0;i<n;i++)
    {
        scanf("%d", &rs[i]);
        flag[i]=0;
    }
    printf("\nEnter the number of frames: ");
    scanf("%d",&f);
    for(i=0;i<f;i++)
    {
        count[i]=0;
        m[i]=-1;
    }
    printf("\nThe Page Replacement Process is: \n");
    for(i=0;i<n;i++)
    {
        for(j=0;j<f;j++)
        {
            if (m[j]==rs[i])
            {
                flag[i]=1;
                count[j]=next;
                next++;
            }
        }
        if (flag[i]==0)
        {
            if(i<f)
            {
                m[i]=rs[i];
                count[i]=next;
                next++;
```

Line: 114 Col: 21 Sel: 0 Lines: 170 Length: 3500 Insert Done parsing in 0.203 seconds

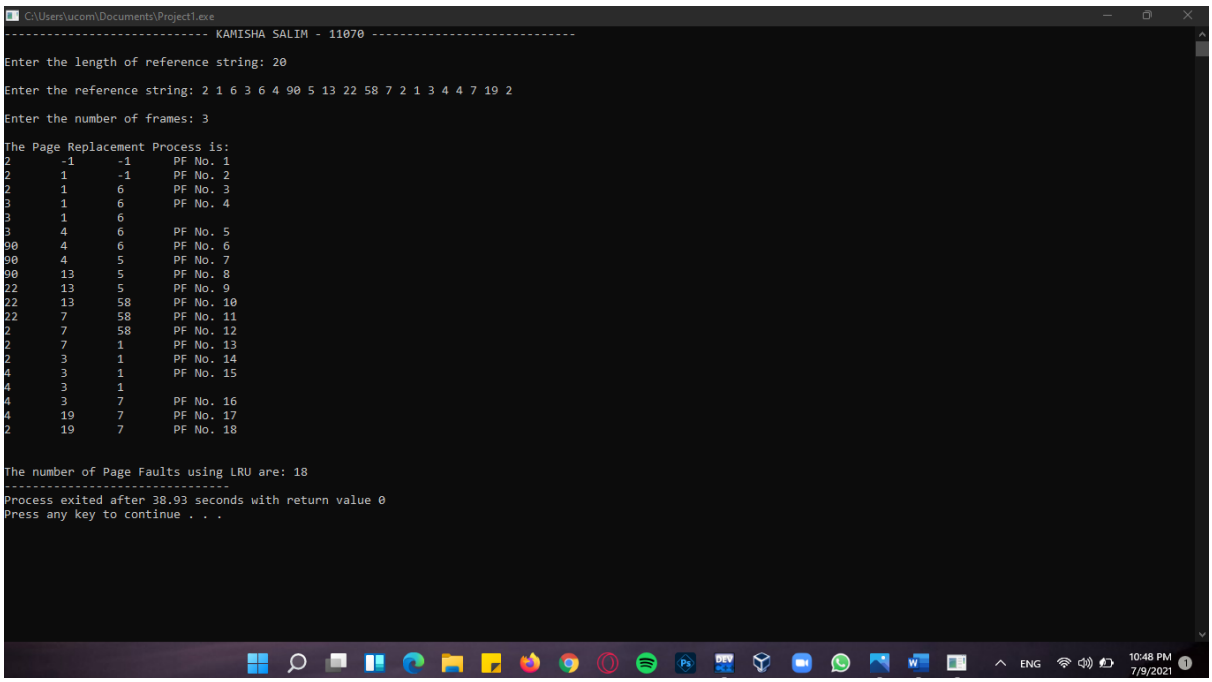


```
            {
                flag[i]=1;
                count[j]=next;
                next++;
            }
        }
        if (flag[i]==0)
        {
            if(i<f)
            {
                m[i]=rs[i];
                count[i]=next;
                next++;
            }
            else
            {
                min=0;
                for(j=1;j<f;j++)
                if(count[min]>count[j])
                min=j;
                m[min]=rs[i];
                count[min]=next;
                next++;
            }
            pf++;
        }
        for(j=0;j<f;j++)
        printf("%d\t",m[j]);
        if(flag[i]==1)
        printf("PF No. %d",pf);
        printf("\n");
    }
    printf("\n\nThe number of page faults using LRU are: %d", pf);
    return 0;
}
```

Line: 114 Col: 46 Sel: 0 Lines: 169 Length: 3401 Insert Done parsing in 0.078 seconds

Oracle VM VirtualBox

OUTPUT:


C:\Users\ucom\Documents\Project1.exe
---------- KAMISHA SALIM - 11070 ----------
Enter the length of reference string: 20
Enter the reference string: 2 1 6 3 6 4 90 5 13 22 58 7 2 1 3 4 4 7 19 2
Enter the number of frames: 3
The Page Replacement Process is:
2 -1 -1 PF No. 1
2 1 -1 PF No. 2
2 1 6 PF No. 3
3 1 6 PF No. 4
3 1 6
3 4 6 PF No. 5
90 4 6 PF No. 6
90 4 5 PF No. 7
90 13 5 PF No. 8
22 13 5 PF No. 9
22 13 58 PF No. 10
22 7 58 PF No. 11
2 7 58 PF No. 12
2 7 1 PF No. 13
2 3 1 PF No. 14
4 3 1 PF No. 15
4 3 1
4 3 7 PF No. 16
4 19 7 PF No. 17
2 19 7 PF No. 18
The number of Page Faults using LRU are: 18
Process exited after 38.93 seconds with return value 0
Press any key to continue . . .
ENG
10:48 PM
7/9/2021