```
dit View Search Project Build Debug Fortran wxSmith To
                                                "C:\Users\siva8\OneDrive\Documents\program 6...

    Press 1 for Producer

                                               Press 2 for Consumer
         3. Press 3 for Exit
                                               Enter your choice:2
m 6.c ×
                                               Buffer is empty!
    #include <stdio.h>
                                               Enter your choice:1
2
    #include <stdlib.h>
    int mutex = 1;
                                               Producerproducesitem 1
    int full = 0;
                                               Enter your choice:2
    int empty = 10, x = 0;
    void producer()
                                                Consumer consumes item 1
                                               Enter your choice:1
8
    --mutex:
9
    ++full;
                                               Producerproducesitem 1
LO
    --empty;
11
                                               Enter your choice:1
     x++;
12
    printf("\nProducerproduces""item %d",x);
13
                                               Producerproducesitem 2
    ++mutex;
14
                                               Enter your choice:3
15
    void consumer()
16 =1
                                               Process returned 0 (0x0) execution time : 36.342 s
17
    --mutex;
                                               Press any key to continue.
    --full;
18
19
    ++empty;
    printf("\nConsumer consumes ""item %d",x);
20
21
     x--;
22
    ++mutex;
23
24
    int main()
25
26
    int n, i;
    printf("\n1. Press 1 for Producer""\n2. Press 2 for Consumer""\n3. Press 3 for Exit");
```

```
lit View Search Project Build Debug Fortran wxSmith Tools/
                                                     Select "C:\Users\siva8\OneDrive\Documents\OS\... —
                                                     ENTER THE NUMBER OF PAGES:
         n 6.c × Program 7.c ×
                                                     ENTER THE PAGE NUMBER :
    #include<stdio.h>
    int main()
2
3
    int i, j, n, a [50], frame [10], no, k, avail, count=0; 3
    printf ("\n ENTER THE NUMBER OF PAGES:\n");
    scanf ("%d", &n);
    printf("\n ENTER THE PAGE NUMBER :\n");
    for (i=1; i<=n; i++)
    scanf("%d", &a[i]);
    printf ("\n ENTER THE NUMBER OF FRAMES :");
    scanf ("%d", &no);
    for (i=0; i < no; i++)
3
    frame [i] = -1;
    j=0;
                                                     ENTER THE NUMBER OF FRAMES :4
    printf("\tref string\t page frames\n");
                                                            ref string
                                                                            page frames
    for (i=1; i<=n; i++)
                                                                    1
                                                                            -1
                                                                                   -1
                                                                                           -1
7
                                                                    1
                                                                            2
                                                                                   -1
                                                                                           -1
    printf("%d\t\t",a[i]);
                                                                    1
                                                                                   3
                                                                                           -1
    avail=0;
                                                                                           0
    for (k=0; k<no; k++)
    if(frame[k]==a[i])
    avail=1;
                                                                           5
                                                                                   3
                                                                                           0
3
    if (avail==0)
                                                                           5
                                                                                   4
                                                                   6
                                                                                           0
4
                                                                           5
                                                                                   4
5
    frame[j]=a[i];
                                                                    2
    j=(j+1)%no;
7
    count++;
                                                                    2
    for (k=0; k<no; k++)
                                                                           1
                                                                                           3
    printf("%d\t", frame[k]);
                                                    Page Fault Is 10
                                                                              execution time : 27.028 s
0
                                                    Process returned 0 (0x0)
    printf("\n");
                                                    Press any key to continue.
```

```
~ yiuuuiir
              D
                                                                  "C:\Users\siva8\OneDrive\Documents\OS\Pr...
                                                                                                                  X
program 6.c × Program 7.c × Program 8.c ×
                                                                 Enter no of pages:13
         #include<stdio.h>
                                                                 Enter the reference string:7
     2
         int main()
     3
     4
         int q[20],p[50],c=0,c1,d,f,i,j,k=0,n,r,t,b[20],c2[20];
     5
         printf("Enter no of pages:");
     6
         scanf ("%d", &n);
         printf ("Enter the reference string:");
     7
     8
         for (i=0; i < n; i++)
     9
         scanf("%d", &p[i]);
         printf ("Enter no of frames:");
    10
         scanf ("%d", &f);
    11
         q[k]=p[k];
    12
         printf("\n\t%d\n",q[k]);
    13
    14
         C++;
    15
                                                                 Enter no of frames:3
         k++;
    16
         for (i=1; i<n; i++)
    17
    18
         c1=0;
    19
         for (j=0; j<f; j++)
                                                                                       5
    20
                                                                                       5
                                                                        3
                                                                                6
         if(p[i]!=q[j])
    21
                                                                        3
    22
         c1++;
                                                                        3
                                                                                4
                                                                                       0
    23
                                                                        3
                                                                                1
                                                                                       0
         if (c1==f)
    24
    25
    26
         C++;
                                                                 The no of page faults is 8
    27
         if(k<f)
                                                                 Process returned 0 (0x0) execution time : 42.652 s
    28
                                                                 Press any key to continue.
    29
         q[k]=p[i];
    30
         k++;
    31
         for (j=0; j<k; j++)
```

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Edit View Search Project Build Debug Fortran wxSmith Tools
                                                 "C:\Users\siva8\OneDrive\Documents\OS\Progra...
                                                                                                  ×
                                                                                            Enter number of frames: 3
                 main(): int
sal>
                                                Enter number of pages: 14
          am 6.c × Program 7.c × Program 8.c × Program 9.c ×
     #include<stdio.h>
     int main()
 3
     int no of frames, no of pages, frames[10], pages
     max, faults = 0;
     printf("Enter number of frames: ");
     scanf("%d", &no of frames);
     printf("Enter number of pages: ");
     scanf ("%d", &no of pages);
     printf ("Enter page reference string: ");
10
11
     for (i = 0; i < no of pages; ++i)
12
13
     scanf("%d", &pages[i]);
                                                       -1
                                                              -1
14
                                                              -1
15
     for (i = 0; i < no of frames; ++i)
                                                       2
                                                              -1
16
                                                       2
                                                              -1
17
     frames[i] = -1;
                                                              0
18
                                                       2
                                                              0
19
     for(i = 0; i < no of pages; ++i)
                                                       2
                                                              0
20
                                                       6
21
     flag1 = flag2 = 0;
                                                       6
22
     for(j = 0; j < no of frames; ++j)
                                                       6
                                                              4
23
                                                       6
                                                              4
24
     if(frames[j] == pages[i])
                                                       6
                                                              4
25
                                                       6
     flag1 = flag2 = 1;
                                                              4
26
27
     break;
28
29
                                                Total Page Faults = 8
30
     if (flag1 == 0)
                                                Process returned 0 (0x0)
                                                                        execution time : 23.056 s
31
                                                Press any key to continue.
```

```
Program 10.c - Code::Blocks 20.03
                                                                               "C:\Users\siva8\OneDrive\Documents\OS\Program 10.exe"
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks
                                                                              How many Records ? 5
D 61 6-6"
                                                                              Read the Info for Student: 1 (usn,name,m1,m2,m3)
<global>
                      v search(FILE* fp, int usn key): int
                                                                              Shiva
              program 6.c × Program 7.c × Program 8.c × Program 9.c × Program 10.c ×
         #include <stdio.h>
                                                                              Read the Info for Student: 2 (usn,name,m1,m2,m3)
         typedef struct
                                                                              Srinu
         int usn;
                                                                              100
         char name [25];
         int m1, m2, m3;
     7
                                                                              Read the Info for Student: 3 (usn,name,m1,m2,m3)
     8
         STD:
         STD s:
                                                                              Malli
    10
         void display (FILE *);
    11
         int search (FILE *, int);
         void main()
    12
    13 日(
                                                                              Read the Info for Student: 4 (usn,name,m1,m2,m3)
    14
         int i, n, usn key, opn;
    15
         FILE *fp;
                                                                              Abhi
    16
         printf(" How many Records ? ");
    17
         scanf ("%d", &n);
    18
         fp=fopen("stud.dat", "w");
    19
         for (i=0;i<n;i++)
                                                                              Read the Info for Student: 5 (usn,name,m1,m2,m3)
    20
    21
         printf("Read the Info for Student: %d (usn, name, m1, m2, m3) \n", i+1);
         scanf ("%d%s%d%d%d", &s.usn, s.name, &s.ml, &s.m2, &s.m3);
    22
                                                                              Raghu
    23
         fwrite (&s, sizeof(s), 1, fp);
    24
         fclose(fp);
    25
    26
         fp=fopen("stud.dat", "r");
                                                                              Press 1- Display
                                                                                                     2- Search
                                                                                                                    3- Exit
                                                                                                                                   Your Option?
    27
         do
    28
                                                                               Student Records in the File
    29
         printf("Press 1- Display\t 2- Search\t 3- Exit\t Your Option?");
                                                                                      Shiva 100
                                                                                                    98
                                                                                                            90
    30
         scanf ("%d", &opn);
                                                                                      Srinu 100
                                                                                                    98
                                                                                                            99
    31
         switch (opn)
                                                                                     Malli
                                                                                            89
                                                                                                    90
                                                                                                            91
                                                                                      Abhi
                                                                                                    93
                                                                                                            95
                                                                                             97
                                                                                      Raghu 97
                                                                                                            95
```