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CLASS:- B.E - 4
ROLL NO:- 04
BATCH:- A

EXPERIMENT 10

SOURCE CODE:

```
#include<stdio.h>
#include<conio.h>

void main()
{
    float x[4];
    float a[4];
    float b[4];
    int w0=1,w1=-1;
    clrscr();
    printf("4 point fft\n");
    x[0]=2;
    x[1]=2;
    x[2]=4;
    x[3]=0;
    a[0]=x[0]+x[2];
    a[1]=x[0]-x[2];
    a[2]=x[1]+x[3];
    a[3]=x[1]-x[3];
    printf("a[0] = %f\n",a[0]);
    printf("a[1] = %f\n",a[1]);
    printf("a[2] = %f\n",a[2]);
    printf("a[3] = %f\n",a[3]);
    b[0]=a[0]+(w0 * a[2]);
    b[2]=a[0]+(w1 * a[2]);
    printf("b[0] = %f\n ",b[0]);
    printf("b[1] = %f+%fi\n ",a[1],a[3]);
    printf("b[2] = %f\n ",b[2]);
    printf("b[3] = %f-%fi\n ",a[1],a[3]);
    getch();
}
```

OUTPUT:

```
4 point fft
a[0] = 6.000000
a[1] = -2.000000
a[2] = 2.000000
a[3] = 2.000000
b[0] = 8.000000
b[1] = -2.000000+2.000000i
b[2] = 4.000000
b[3] = -2.000000-2.000000i
```