

/\*Assignment 13 : Write a program in C using function and pointers to demonstrate the use of pointer arithmetic by

taking input in an array

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

```
int a[10],i,n,*p;//global variables
```

```
int main() //main function
```

```
{
```

```
    printf("Enter the size of array\n");
```

```
    scanf("%d",&n);//Taking the size of the array
```

```
    printf("Enter the elements of an array\n\n");
```

```
    for(i=0;i<n;i++)//for loop
```

```
    {
```

```
        scanf("%d",&a[i]);//scanning the size of the array
```

```
    }
```

```
    p=&a[0];
```

```
    pointer_arithmetic(&a,n);//function
```

```
    return 0;
```

```
}
```

```
void pointer_arithmetic(int *p,int n)//function
```

```
{
```

```
    printf("Pointer_arithmetic using increment \n\n");//increment
```

```
    for(i=0;i<n;i++)
```

```
    {
```

```
        printf("values at addresses are %d\n",*p);//printing value of addresses
```

```
        printf("Address of array element is %u\n", p);
```

```
        p++;//increament operator
```

```

    }

    printf("\n\npointer arithmetic using decrement\n\n");//decrement
    p=&a[n-1];
    for(i=0;i<n;i++)
    {
        printf("values at addresses are %d\n1",*p);
        printf("Address of array elements is %i\n", p);//printing Address
        p--;//decrement operator
    }
}

/*

```

Output-

Enter the size of array

6

Enter the elements of an array

99

98

98

67

62

45

Pointer\_arithmetic using increment

values at addresses are 99

Address of array element is 4225600

values at addresses are 98

Address of array element is 4225604

values at addresses are 98

Address of array element is 4225608

values at addresses are 67

Address of array element is 4225612

values at addresses are 62

Address of array element is 4225616

values at addresses are 45

Address of array element is 4225620

pointer arithmetic using decrement

values at addresses are 45

1Address of array elements is 4225620

values at addresses are 62

1Address of array elements is 4225616

values at addresses are 67

1Address of array elements is 4225612

values at addresses are 98

1Address of array elements is 4225608

values at addresses are 98

1Address of array elements is 4225604

values at addresses are 99

1Address of array elements is 4225600

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Process exited after 96.92 seconds with return value 0

Press any key to continue . . .\*/