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**Program 4**

**Question:**

Write a program using structure to read, display, sum and difference of two complex numbers using pointer.

**Code:**

#include<stdio.h>

#include<stdlib.h>

typedef struct

{

int realnum1;

int imgnum1;

int realnum2;

int imgnum2;

int realsum,imgsum;

int realdifference,imgdifference;

}numbers;

int main()

{

numbers\* n=(numbers\*) malloc(sizeof(numbers));

printf("Enter the real and imaginary part of Number1\n");

scanf("%d",&n->realnum1);

scanf("%d",&n->imgnum1);

printf("Enter the real and imaginary part of Number2\n");

scanf("%d",&n->realnum2);

scanf("%d",&n->imgnum2);

/\*Inputs Taken\*/

n->realsum=n->realnum1+n->realnum2;

n->imgsum=n->imgnum1+n->imgnum2;

if(n->realnum1>=n->realnum2)

{

n->realdifference=n->realnum1-n->realnum2;

n->imgdifference=n->imgnum1-n->imgnum2;

}

else

{

n->realdifference=n->realnum2-n->realnum1;

n->imgdifference=n->imgnum2-n->imgnum1;

}

/\*Operations Done\*/

printf("\n\nOutputs:\n");

printf("Sum: %d+%di\n",n->realsum,n->imgsum);

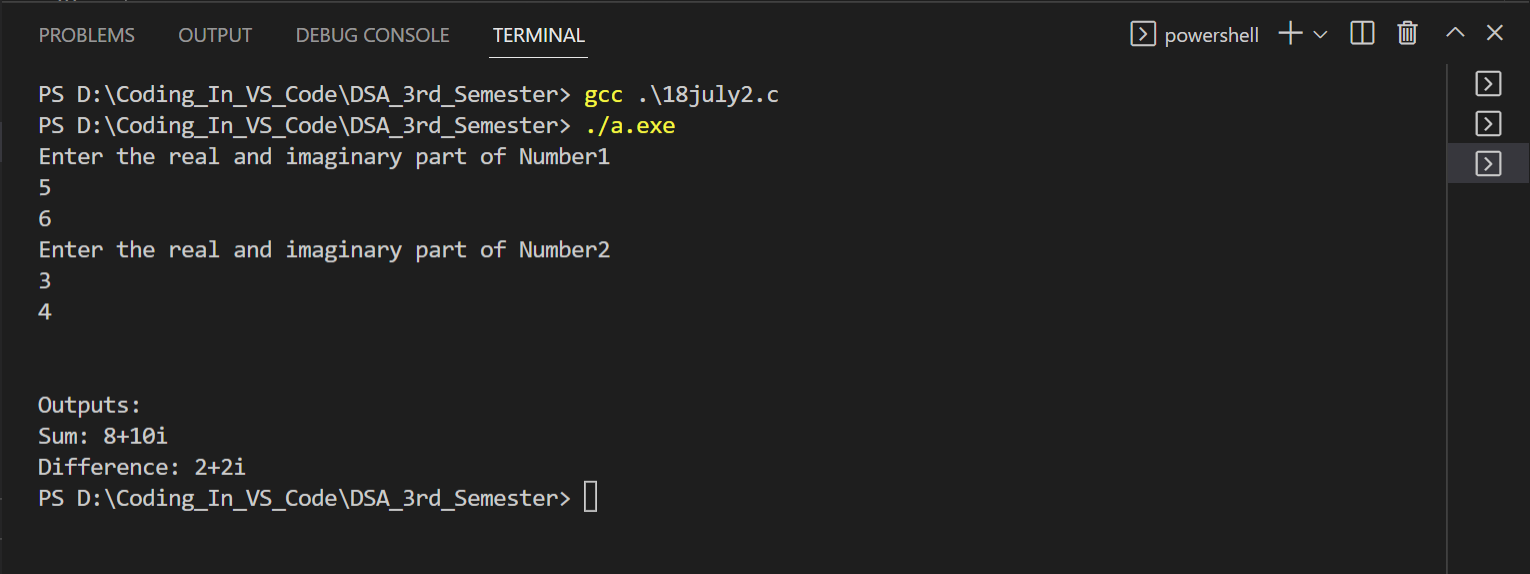
printf("Difference: %d+%di\n",n->realdifference,n->imgdifference);

/\*Outputs shown\*/

return 0;

}

**Output:**

****