C PROGRAM TO PERFORM COMPLEX NUMBER OPERATIONS

```
#include <stdio.h>
#include <stdlib.h>
struct complex
{
  int real, img;
};

int main()
{
  int choice;
  struct complex a, b, c;

  while(1)
  {
    printf("Press 1 to add two complex numbers.\n");
    printf("Press 2 to subtract two complex numbers.\n");
    printf("Press 3 to multiply two complex numbers.\n");
    printf("Press 4 to divide two complex numbers.\n");
    printf("Press 5 to exit.\n");
    printf("Enter your choice\n");
    scanf("%d", &choice);

    if (choice == 5)
      return 0;

    if (choice >= 1 && choice <= 4)
    {
      printf("Enter a and b where a + ib is the first complex number.");
      printf("\na = ");
      scanf("%d", &a.real);
      printf("b = ");
      scanf("%d", &a.img);
      printf("Enter c and d where c + id is the second complex number.");
      printf("\nc = ");
      scanf("%d", &b.real);
      printf("d = ");
      scanf("%d", &b.img);
    }
    if (choice == 1)
    {
      c.real = a.real + b.real;
      c.img = a.img + b.img;
      printf("Sum of the complex numbers = %d + %di", c.real, c.img);

    }
    else if (choice == 2)
    {
```

```
      c.real = a.real - b.real;
      c.img = a.img - b.img;
  printf("Difference of the complex numbers = %d + %di", c.real, c.img);

    }
    else if (choice == 3)
    {
      c.real = a.real*b.real - a.img*b.img;
      c.img = a.img*b.real + a.real*b.img;
      printf("Multiplication of the complex numbers = %d + %di", c.real, c.img);

    }
    else if (choice == 4)
    {
     c.real = (a.real)/(b.real);
        c.img = (a.img)/(b.img);
        printf("Division of the complex numbers = %d + %di", c.real, c.img);



    }
    else
      printf("Invalid choice.");

    printf("\nPress any key to enter choice again...\n");
  }
}
```

OUTPUT