

## Hello.c

```
1  #include <stdio.h>
2  #include <string.h>
3
4  // user defined
5  typedef struct student {
6      int roll;
7      float cgpa;
8      char name[100];
9  } stu ;
10
11 typedef struct computerengineeringstudent {
12     int roll;
13     float cgpa;
14     char name[100];
15 } coe;
16
17 struct address {
18     int houseNO;
19     int block;
20     char city[100];
21     char state[100];
22
23 };
24
25 void printAdd(struct address add);
26
27 int main() {
28     struct address adds[5];
29     // input
30     printf("enter info for person 1 : ");
31     scanf("%d", &adds[0].houseNO);
32     scanf("%d", &adds[0].block);
33     scanf("%s", adds[0].city);
34     scanf("%s", adds[0].state);
35
36     printf("enter info for person 2 : ");
37     scanf("%d", &adds[1].houseNO);
38     scanf("%d", &adds[1].block);
39     scanf("%s", adds[1].city);
40     scanf("%s", adds[1].state);
41
42     printf("enter info for person 3 : ");
43     scanf("%d", &adds[2].houseNO);
44     scanf("%d", &adds[2].block);
45     scanf("%s", adds[2].city);
46     scanf("%s", adds[2].state);
47
48     printf("enter info for person 4 : ");
```

```
49     scanf("%d", &adds[3].houseNO);
50     scanf("%d", &adds[3].block);
51     scanf("%s", adds[3].city);
52     scanf("%s", adds[3].state);
53
54     printf("enter info for person 5 : ");
55     scanf("%d", &adds[4].houseNO);
56     scanf("%d", &adds[4].block);
57     scanf("%s", adds[4].city);
58     scanf("%s", adds[4].state);
59
60     printAdd(adds[0]);
61     printAdd(adds[1]);
62     printAdd(adds[2]);
63     printAdd(adds[3]);
64     printAdd(adds[4]);
65
66
67     return 0;
68 }
69
70 void printAdd(struct address add) {
71     printf("address is : %d, %d, %s, %s\n", add.houseNO, add.block, add.city, add.state);
72 }
73
```

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```
1  #include <stdio.h>
2  #include <string.h>
3
4  // user defined
5  typedef struct student {
6      int roll;
7      float cgpa;
8      char name[100];
9  } stu ;
10
11 typedef struct computerengineeringstudent {
12     int roll;
13     float cgpa;
14     char name[100];
15 } coe;
16
17 struct address {
18     int houseNO;
19     int block;
20     char city[100];
21     char state[100];
22
23 };
24
25 struct vector {
26     int x;
27     int y;
28 };
29
30
31 void calcSum(struct vector v1, struct vector v2, struct vector sum);
32 int main() {
33     struct vector v1 = {5, 10};
34     struct vector v2 = {3, 7};
35     struct vector sum = {0};
36
37     calcSum(v1, v2, sum);
38     return 0;
39 }
40
41 void calcSum(struct vector v1, struct vector v2, struct vector sum) {
42     sum.x = v1.x + v2.x;
43     sum.y = v1.y + v2.y;
44
45     printf("sum of x is %d\n", sum.x);
46     printf("sum of y is %d\n", sum.y);
47 }
48
```

## Hello.c

```
1  #include <stdio.h>
2  #include <string.h>
3
4  // user defined
5  typedef struct student {
6      int roll;
7      float cgpa;
8      char name[100];
9  } stu ;
10 typedef struct computerengineeringstudent {
11     int roll;
12     float cgpa;
13     char name[100];
14 } coe;
15 struct address {
16     int houseNO;
17     int block;
18     char city[100];
19     char state[100];
20 };
21 struct vector {
22     int x;
23     int y;
24 };
25 struct complex {
26     int real;
27     int imag;
28 };
29
30 int main() {
31     struct complex number1 = {5, 8};
32     struct complex *ptr = &number1;
33     printf("real part = %d\n", ptr->real);
34     printf("imaginary part = %d\n", ptr->imag);
35     return 0;
36 }
37
38 void calcSum(struct vector v1, struct vector v2, struct vector sum) {
39     sum.x = v1.x + v2.x;
40     sum.y = v1.y + v2.y;
41
42     printf("sum of x is %d\n", sum.x);
43     printf("sum of y is %d\n", sum.y);
44 }
45
```

## Account.c

```
1  #include <stdio.h>
2  #include <string.h>
3
4  // user defined
5  typedef struct student
6  {
7      int roll;
8      float cgpa;
9      char name[100];
10 } stu;
11 typedef struct computerengineeringstudent
12 {
13     int roll;
14     float cgpa;
15     char name[100];
16 } coe;
17 struct address
18 {
19     int houseNO;
20     int block;
21     char city[100];
22     char state[100];
23 };
24 struct vector
25 {
26     int x;
27     int y;
28 };
29 struct complex
30 {
31     int real;
32     int imag;
33 };
34 typedef struct BankAccount
35 {
36     int accountNo;
37     char name[100];
38     float balance;
39 } acc;
40
41 int main()
42 {
43     acc acc1 = {123, "Shubham"};
44     acc1.balance = 5000.0;
45     acc acc2 = {124, "Rajat"};
46     acc2.balance = 2000.0;
47     acc acc3 = {125, "Nitesh"};
48     acc3.balance = 3000.0;
```

```
49     printf("Account no = %d\n", acc1.accountNo);
50     printf("Account name = %s\n", acc1.name);
51     printf("Account balance = %f\n", acc1.balance);
52
53     printf("Account no = %d\n", acc2.accountNo);
54     printf("Account name = %s\n", acc2.name);
55     printf("Account balance = %f\n", acc2.balance);
56
57     printf("Account no = %d\n", acc3.accountNo);
58     printf("Account name = %s\n", acc3.name);
59     printf("Account balance = %f\n", acc3.balance);
60     return 0;
61 }
62
63 void calcSum(struct vector v1, struct vector v2, struct vector sum)
64 {
65     sum.x = v1.x + v2.x;
66     sum.y = v1.y + v2.y;
67
68     printf("sum of x is %d\n", sum.x);
69     printf("sum of y is %d\n", sum.y);
70 }
71
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("NewTest.txt", "r");
6      if(fptr == NULL) {
7          printf("file doesn't exist\n");
8      } else {
9          fclose(fptr);
10     }
11
12     return 0;
13 }
```

## fileopen.c

```
1  #include <stdio.h>
2
3  int main()
4  {
5      FILE *fptr;
6      fptr = fopen("Test.txt", "r");
7
8      char ch;
9      fscanf(fptr, "%c", &ch);
10     printf("character = %c\n", ch);
11     fscanf(fptr, "%c", &ch);
12     printf("character = %c\n", ch);
13     fscanf(fptr, "%c", &ch);
14     printf("character = %c\n", ch);
15     fscanf(fptr, "%c", &ch);
16     printf("character = %c\n", ch);
17     fscanf(fptr, "%c", &ch);
18     printf("character = %c\n", ch);
19
20     fclose(fptr);
21     return 0;
22 }
```



## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Test.txt", "r");
6
7      int ch;
8      fscanf(fptr, "%d", &ch);
9      printf("character = %d\n", ch);
10     fscanf(fptr, "%d", &ch);
11     printf("character = %d\n", ch);
12     fscanf(fptr, "%d", &ch);
13     printf("character = %d\n", ch);
14
15     fclose(fptr);
16     return 0;
17 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Test.txt", "w");
6
7      fprintf(fptr, "%c", 'M');
8      fprintf(fptr, "%c", 'A');
9      fprintf(fptr, "%c", 'N');
10     fprintf(fptr, "%c", 'G');
11     fprintf(fptr, "%c", 'O');
12
13     fclose(fptr);
14     return 0;
15 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Test.txt", "a");
6
7      fprintf(fptr, "%c", 'M');
8      fprintf(fptr, "%c", 'A');
9      fprintf(fptr, "%c", 'N');
10     fprintf(fptr, "%c", 'G');
11     fprintf(fptr, "%c", 'O');
12
13     fclose(fptr);
14     return 0;
15 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Test.txt", "r");
6
7      printf("%c\n", fgetc(fptr));
8      printf("%c\n", fgetc(fptr));
9      printf("%c\n", fgetc(fptr));
10     printf("%c\n", fgetc(fptr));
11     printf("%c\n", fgetc(fptr));
12
13     // fprintf(fptr, "%c", 'M');
14     // fprintf(fptr, "%c", 'A');
15     // fprintf(fptr, "%c", 'N');
16     // fprintf(fptr, "%c", 'G');
17     // fprintf(fptr, "%c", 'O');
18
19     fclose(fptr);
20     return 0;
21 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Test.txt", "w");
6
7      fputc('M', fptr);
8      fputc('A', fptr);
9      fputc('N', fptr);
10     fputc('G', fptr);
11     fputc('O', fptr);
12
13     fclose(fptr);
14     return 0;
15 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Test.txt", "r");
6      char ch;
7      ch = fgetc(fptr);
8      while (ch != EOF) {
9          printf("%c", ch);
10         ch = fgetc(fptr);
11     }
12     printf("\n");
13
14     fclose(fptr);
15     return 0;
16 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("test.txt", "r");
6      int n;
7      fscanf(fptr, "%d", &n);
8      printf("number = %d\n", n);
9      fscanf(fptr, "%d", &n);
10     printf("number = %d\n", n);
11     fscanf(fptr, "%d", &n);
12     printf("number = %d\n", n);
13     fscanf(fptr, "%d", &n);
14     printf("number = %d\n", n);
15     fscanf(fptr, "%d", &n);
16     printf("number = %d\n", n);
17
18     fclose(fptr);
19     return 0;
20 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Student.txt", "w");
6
7      char name[100];
8      int age;
9      float cgpa;
10
11     printf("enter name : ");
12     scanf("%s", &name);
13     printf("enter age : ");
14     scanf("%d", &age);
15     printf("enter cgpa : ");
16     scanf("%f", &cgpa);
17
18     fprintf(fptr, "%s\t", name);
19     fprintf(fptr, "%d\t", age);
20     fprintf(fptr, "%f", cgpa);
21
22     fclose(fptr);
23     return 0;
24 }
```



## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Student.txt", "w");
6
7      char name[100];
8      int age;
9      float cgpa;
10
11     printf("enter name : ");
12     scanf("%s", &name);
13     printf("enter age : ");
14     scanf("%d", &age);
15     printf("enter cgpa : ");
16     scanf("%f", &cgpa);
17
18     fprintf(fptr, "student name : %s\n", name);
19     fprintf(fptr, "student age : %d\n", age);
20     fprintf(fptr, "student cgpa : %.2f", cgpa);
21
22     fclose(fptr);
23     return 0;
24 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Odd.txt", "w");
6
7      int n;
8      printf("enter n :");
9      scanf("%d", &n);
10
11     for(int i=1; i<=n; i++) {
12         if(i % 2 != 0) {
13             fprintf(fptr, "%d\n", i);
14         }
15     }
16
17     fclose(fptr);
18     return 0;
19 }
```

## Hello.c

```
1  #include <stdio.h>
2
3  int main() {
4      FILE *fptr;
5      fptr = fopen("Sum.txt", "r");
6
7      int a;
8      fscanf(fptr, "%d", &a);
9      int b;
10     fscanf(fptr, "%d", &b);
11
12     fclose(fptr);
13
14     fptr = fopen("Sum.txt", "w");
15     fprintf(fptr, "%d", a + b);
16     fclose(fptr);
17     return 0;
18 }
```

## Hello.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main() {
5      int *ptr;
6      ptr = (int *) malloc(5 * sizeof(int));
7
8      ptr[0] = 1;
9      ptr[1] = 3;
10     ptr[2] = 5;
11     ptr[3] = 7;
12     ptr[4] = 9;
13
14     for(int i = 0; i < 5; i++) {
15         printf("%d\n", ptr[i]);
16     }
17
18     return 0;
19 }
```

## Hello.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main() {
5      float *ptr;
6      ptr = (float *) malloc(5 * sizeof(float));
7
8      ptr[0] = 1;
9      ptr[1] = 3;
10     ptr[2] = 5;
11     ptr[3] = 7;
12     ptr[4] = 9;
13
14     for(int i = 0; i < 5; i++) {
15         printf("%f\n", ptr[i]);
16     }
17
18     return 0;
19 }
```

## Hello.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main() {
5      float *ptr;
6      ptr = (float *) calloc(5, sizeof(float));
7
8      for(int i = 0; i < 5; i++) {
9          printf("%f\n", ptr[i]);
10     }
11
12     return 0;
13 }
```

## Hello.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main() {
5      int *ptr;
6      int n;
7      printf("enter n : ");
8      scanf("%d", &n);
9
10     ptr = (int *) calloc(n, sizeof(int));
11
12     for(int i=0; i<n; i++) {
13         printf("%d\n", ptr[i]);
14     }
15
16     return 0;
17 }
```

## Hello.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main() {
5      int *ptr;
6      int n;
7      printf("enter n : ");
8      scanf("%d", &n);
9
10     ptr = (int *) calloc(n, sizeof(int));
11
12     for(int i=0; i<n; i++) {
13         printf("%d\n", ptr[i]);
14     }
15
16     free(ptr);
17
18     ptr = (int *) calloc(2, sizeof(int));
19     for(int i=0; i<n; i++) {
20         printf("%d\n", ptr[i]);
21     }
22
23     return 0;
24 }
```



## Hello.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main() {
5      int *ptr;
6      int n;
7      printf("enter n : ");
8      scanf("%d", &n);
9
10     ptr = (int *) calloc(n, sizeof(int));
11
12     for(int i=0; i<n; i++) {
13         printf("%d\n", ptr[i]);
14     }
15
16     free(ptr);
17
18     ptr = (int *) calloc(2, sizeof(int));
19     for(int i=0; i<2; i++) {
20         printf("%d\n", ptr[i]);
21     }
22
23     return 0;
24 }
```

## Hello.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main() {
5      int *ptr;
6      ptr = (int *) calloc(5, sizeof(int)); // Allocate memory for 5 integers
7
8      printf("enter numbers(5) : ");
9      for(int i=0; i<5; i++) {
10         scanf("%d", &ptr[i]); // Read integers into allocated memory
11     }
12
13     ptr = realloc(ptr, 8); // Resize memory to hold 8 integers
14     printf("enter numbers(8) : ");
15     for(int i=0; i<8; i++) {
16         scanf("%d", &ptr[i]); // Read additional integers into resized memory
17     }
18
19     // Print all integers
20     for(int i=0; i<8; i++) {
21         printf("number %d is %d", i, ptr[i]); // Print each integer
22     }
23     return 0;
24 }
```

## Hello.c

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main() {
5      int *ptr;
6      ptr = (int *) calloc(5, sizeof(int));
7
8      printf("enter numbers(5) : ");
9      for(int i=0; i<5; i++) {
10         scanf("%d", &ptr[i]);
11     }
12
13     ptr = realloc(ptr, 8);
14     ptr = realloc(ptr, 6 * sizeof(int));
15     printf("enter numbers(8) : ");
16     for(int i=0; i<8; i++) {
17         scanf("%d", &ptr[i]);
18     }
19
20     // Print
21     for(int i=0; i<8; i++) {
22         printf("number %d is %d\n", i, ptr[i]);
23     }
24
25     return 0;
26 }
```