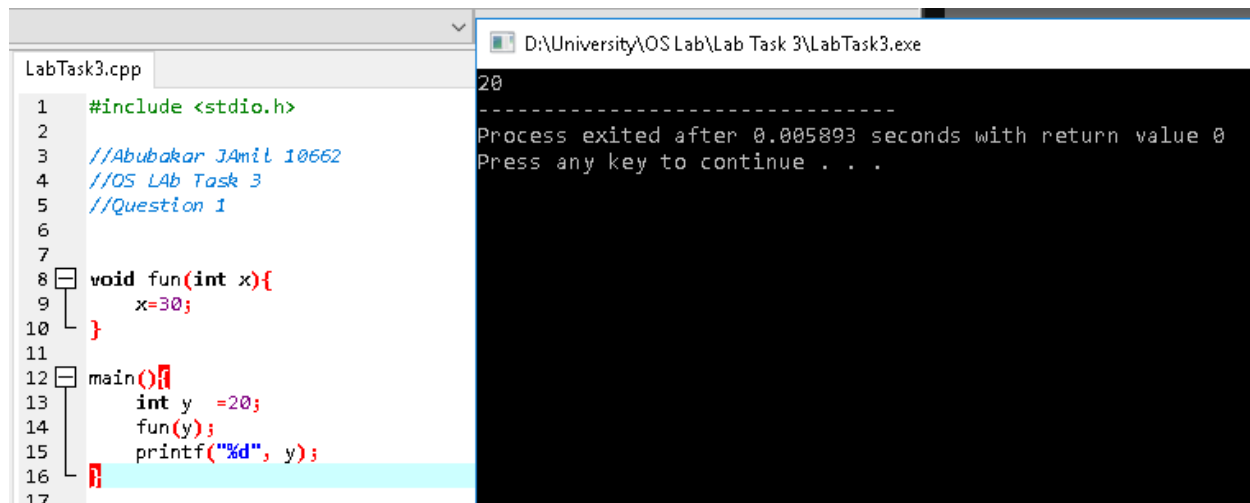


OS Lab 3

Abubakar Jamil

10662

Task 1:

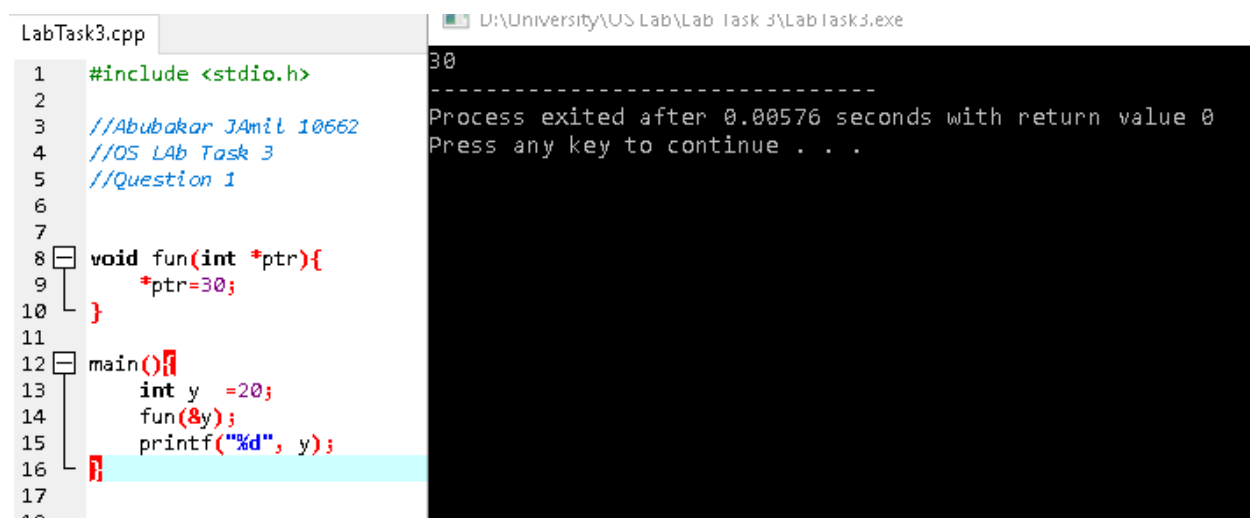


The screenshot shows a C++ IDE with a file named LabTask3.cpp. The code defines a function `fun` that takes an integer `x` and sets `x=30`. In the `main` function, an integer `y` is initialized to 20, `fun(y)` is called, and `printf` prints the value of `y`. The output window shows the program execution, displaying the value 20, a separator line, the exit message, and a prompt to press any key to continue.

```
LabTask3.cpp
1  #include <stdio.h>
2
3  //Abubakar Jamil 10662
4  //OS Lab Task 3
5  //Question 1
6
7
8  void fun(int x){
9      x=30;
10 }
11
12 main()
13     int y =20;
14     fun(y);
15     printf("%d", y);
16
17
```

```
D:\University\OS Lab\Lab Task 3\LabTask3.exe
20
-----
Process exited after 0.005893 seconds with return value 0
Press any key to continue . . .
```

Task 2:



The screenshot shows a C++ IDE with a file named LabTask3.cpp. The code defines a function `fun` that takes a pointer to an integer `*ptr` and sets `*ptr=30`. In the `main` function, an integer `y` is initialized to 20, `fun(&y)` is called, and `printf` prints the value of `y`. The output window shows the program execution, displaying the value 30, a separator line, the exit message, and a prompt to press any key to continue.

```
LabTask3.cpp
1  #include <stdio.h>
2
3  //Abubakar Jamil 10662
4  //OS Lab Task 3
5  //Question 1
6
7
8  void fun(int *ptr){
9      *ptr=30;
10 }
11
12 main()
13     int y =20;
14     fun(&y);
15     printf("%d", y);
16
17
18
```

```
D:\University\OS Lab\Lab Task 3\LabTask3.exe
30
-----
Process exited after 0.00576 seconds with return value 0
Press any key to continue . . .
```

Task 3:

```
2 //Abubakar Jamil 10662
3 //OS Lab Task 3
4 //Question 3
5
6
7 main(){
8     int *ptr;
9     int x;
10
11     ptr = &x;
12     *ptr = 0;
13
14     printf("x = %d\n",x);
15     printf("*ptr = %d\n",*ptr);
16
17     *ptr += 5;
18     printf("x = %d\n",x);
19     printf("*ptr = %d\n",*ptr);
20
21     (*ptr)++;
22     printf("x = %d\n",x);
23     printf("*ptr = %d\n",*ptr);
24
25 }
26
```

D:\University\OS Lab\Lab Task 3\LabTask3.exe

```
x = 0
*ptr = 0
x = 5
*ptr = 5
x = 6
*ptr = 6

-----
Process exited after 0.007442 seconds
Press any key to continue . . .
```

Task 4:

```
1 #include<stdio.h>
2 #include<stdlib.h>
3
4 //Abubakar Jamil 10662
5 //OS Lab Task 3
6 //Question 4
7
8 main(){
9
10     printf("Abubakar Jamil 10662\nOS Lab Task 3\nQuestion 4\n");
11     int *ptr, i, sum=0;
12     ptr = (int*)malloc(10*sizeof(int));
13
14     for(i=0;i<10;i++){
15         ptr[i] = i;
16     }
17     printf("First Allocation\n\n");
18     for(i=0;i<10;i++){
19         printf("%d\n",*(ptr+i));
20     }
21     for(i=0;i<10;i++){
22         sum += *(ptr+i);
23     }
24     printf("Sum of array elements is: %d\n",sum);
25
26     ptr = (int*)realloc(ptr, 10*sizeof(int));
27     printf("Reallocation\n\n");
28     for(i=0;i<10;i++){
29         printf("%d\n",*(ptr+i));
30     }
31     free(ptr);
32 }
33
```

D:\University\OS Lab\Lab Task 3\LabTask3.exe

```
Abubakar Jamil 10662
OS Lab Task 3
Question 4
First Allocation
2057888
0
2031952
0
1801544309
1331458657
1917085038
6649449
1463636815
1868852841
Sum of array elements is: -196617643
Reallocation
2057888
0
2031952
0
1801544309
1331458657
1917085038
6649449
1463636815
1868852841
```