OPERATING SYSTEM LAB TASK – 03

Name: Kamisha Salim

S.ID: 11070

QUESTION – 1

Lab-3 Exercises:

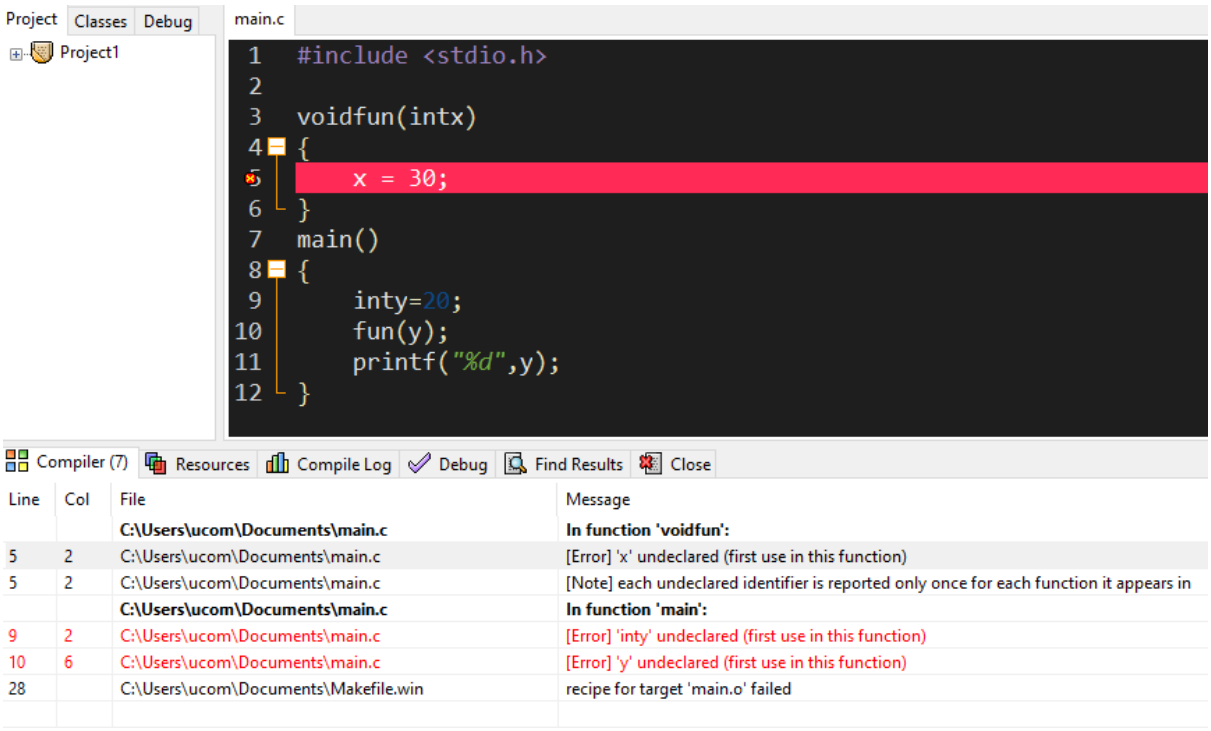
What is the output of following programs?

1)

```
#include <stdio.h>
voidfun(intx)
{
        x = 30;
}
main()
{
        inty = 20;
        fun(y);
        printf("%d", y);
 }
```

Output:

OUTPUT (if code is wrong):



OUTPUT (if code is corrected):

```c
#include <stdio.h>

void fun(int x)
{
    x = 30;
}
main()
{
    int y=20;
    fun(y);
    printf("%d",y);
}
```

```
C:\Users\ucom\Documents\Project1.exe
20
--------------------------------
Process exited after 0.05236 secon
Press any key to continue . . .
```

QUESTION – 2

```c
# include <stdio.h>
voidfun(int*ptr)
{
        *ptr = 30;
}

intmain()
{
        inty = 20;
        fun(&y);
        printf("%d", y);
}
```

Output:

OUTPUT (if code is wrong):

Project1

```c
#include <stdio.h>

voidfun(int*ptr)
{
    *ptr = 30;
}
intmain()
{
    inty=20;
    fun(&y);
    printf("%d",y);
}
```

Compiler (5) | Resources | Compile Log | Debug | Find Results | Close

Line	Col	File	Message
		C:\Users\ucom\Documents\main.c	**In function 'intmain':**
9	2	C:\Users\ucom\Documents\main.c	[Error] 'inty' undeclared (first use in this function)
9	2	C:\Users\ucom\Documents\main.c	[Note] each undeclared identifier is reported only once for each function it appears in
10	7	C:\Users\ucom\Documents\main.c	[Error] 'y' undeclared (first use in this function)
28		C:\Users\ucom\Documents\Makefile.win	recipe for target 'main.o' failed

OUTPUT (if code is corrected):

```c
#include <stdio.h>
void fun(int *ptr)
{
    *ptr = 30;
}
int main()
{
    int y=20;
    fun(&y);
    printf("%d",y);
}
```

```
C:\Users\ucom\D
30
--------------
Process exited
Press any key t
```

QUESTION – 3

```c
3)
int main()
{
        int *ptr;
        int x;

        ptr = &x;
        *ptr = 0;

        printf(" x = %d", x);
        printf(" *ptr = %d", *ptr);

        *ptr += 5;
        printf(" x = %d", x);
        printf(" *ptr = %d", *ptr);

        (*ptr)++;

        printf(" x = %dn", x);
        printf(" *ptr = %d", *ptr);

}
```

Output:

OUTPUT:

```c
#include <stdio.h>
int main()
{
    int *ptr;
    int x;
    ptr = &x;
    *ptr = 0;
    printf(" x=%d",x);
    printf(" *ptr=%d",*ptr);
    *ptr += 5;
    printf(" x=%d",x);
    printf(" *ptr=%d",*ptr);
    (*ptr)++;
    printf(" x=%dn",x);
    printf(" *ptr=%d",*ptr);
}
```

```
C:\Users\ucom\Documents\Project1.exe
x=0 *ptr=0 x=5 *ptr=5 x=6n *ptr=6
--------------------------------
Process exited after 0.03585 seconds with return value 7
Press any key to continue . . .
```

QUESTION – 4:

4) Write a program that allocate memory for array and print the array elements along with sum of all elements. Also reallocate memory size again print array element

CODE:

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
        int *ptr, arr, i, sum = 0;
        printf("Allocate memory of array: ");
        scanf("%d",&arr);
        ptr=(int*)malloc(arr*sizeof(int));
        printf("Enter elements: ");
        for(i=0;i<arr;i++)
        {
                scanf("%d",(ptr+i));
        }
        printf("\nAll elements of array: \n");
        for(i=0;i<arr;i++)
        {
                printf("%d\n",*(ptr+i));
        }
        for(i=0;i<arr;i++)
        {
                sum+=*(ptr+i);
```

```
        }
        printf("\nSum of all elements is: %d\n",sum);
        free(ptr);
        printf("\nReallocate memory of array: ");
        scanf("%d",&arr);
        ptr=(int*)malloc(arr*sizeof(int));
        printf("Enter elements: ");
        for(i=0;i<arr;i++)
        {
                scanf("%d",(ptr+i));
        }
        printf("\nAll elements of array: \n");
        for(i=0;i<arr;i++)
        {
                printf("%d\n",*(ptr+i));
        }
        return 0;
}
```

OUTPUT:

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int *ptr, arr, i, sum = 0;
    printf("Allocate memory of array: ");
    scanf("%d",&arr);
    ptr=(int*)malloc(arr*sizeof(int));
    printf("Enter elements: ");
    for(i=0;i<arr;i++)
    {
        scanf("%d",(ptr+i));
    }
    printf("\nAll elements of array: \n");
    for(i=0;i<arr;i++)
    {
        printf("%d\n",*(ptr+i));
    }
    for(i=0;i<arr;i++)
    {
        sum+=*(ptr+i);
    }
    printf("\nSum of all elements is: %d\n",sum);
    free(ptr);
    printf("\nReallocate memory of array: ");
    scanf("%d",&arr);
    ptr=(int*)malloc(arr*sizeof(int));
    printf("Enter elements: ");
    for(i=0;i<arr;i++)
    {
        scanf("%d",(ptr+i));
    }
    printf("\nAll elements of array: \n");
    for(i=0;i<arr;i++)
    {
        printf("%d\n",*(ptr+i));
    }
    return 0;
}
```

```
C:\Users\ucom\Documents\Project1.exe
Allocate memory of array: 5
Enter elements: 1 2 6 7 9

All elements of array:
1
2
6
7
9

Sum of all elements is: 25

Reallocate memory of array: 3
Enter elements: 3 5 8

All elements of array:
3
5
8

--------------------------------
Process exited after 18.29 seconds with return value
Press any key to continue . . .
```