LAB II

a Login to default directory and see if the directory **LAB2** exists. [Hint. **ls**]

b If the directory **LAB2** exists, then remove it. [Hint. To remove the directory **LAB2**, the following steps are needed (i) Go to that directory (**cd LAB2**); (ii) Remove its content (**rm -i ***); (iii) Go back to the previous directory (**cd ..**); (iv) Remove the directory (**rmdir LAB2**).]

c Create the directory **LAB2** (**mkdir LAB2**) and go to the directory (**cd LAB2**).

1. Type the program in a file **fmti.c** and examine/understand the output.

```
#include<stdio.h>
int main(void)
{ int a=123,b=-123,c=12345;
  printf("%2d\n",c);
  printf("%10.2d\n",c);
  printf("%-10.2d\n",c);
  printf("%-7d\n",a);
  printf("%07.2d\n",a);
  printf("%07d\n",a);
  printf("%+0-9.4d\n",a);
  printf("%+09.4d\n",a);
  printf("%+07d\n",a);
  printf("%+07.4d\n",a);
  printf("%+-07.4d\n",a);
  printf("%-08d\n",b);
  printf("%-08.2d\n",b);
  printf("%-8.4d\n",b);
 return 0;
}
```

2. Type the program in a file **fmtf.c** and examine/understand the output.

```
#include <stdio.h>
int main(void)
{ double a=12345.6789;
  printf("\nFormatting with %%e or %%E\n");
  printf("%e\n",a);
  printf("%5e\n",a);
  printf("%5.2E\n",a);
  printf("%5.0E\n",a);
  printf("%#5.0E\n",a);
  printf("%05e\n",a);
  printf("%010.2e\n",a);
  printf("%+010.1e\n",a);
  printf("\nFormatting with %%lf\n");
  printf("%lf\n",a);
  printf("%5lf\n",a);
  printf("%4.2lf\n",a);
  printf("%10.2lf\n",a);
  printf("%-10.2lf\n",a);
  printf("%10.0lf\n",a);
  printf("%#10.0lf\n",a);
  printf("%+010.2lf\n",-a);
```

```
  printf("\nFormatting with %%g \n");
  printf("%g\n",a);
  printf("%9g\n",a);
  printf("%4.3g\n",a);
  printf("%4.5g\n",a);
  printf("%#4.5g\n",a);
  printf("%#9.5g\n",a);
  printf("%5.4g\n",a);
  return(0);
}
```

3. Find the errors (if any) in the following program: (You may type the program in a file **fun.c** and identify the erros during compilation)

```
/* Is it a C program?*/
#include <stdio.h>
int
main(
)
{
int a,b
,c;
a=
2.45;
b
=a+2;
printf(
"Enter an integer:");
scanf(
"%d",
&c);
printf(
"%d %d %d\n",a,
b,c);
return
0;
}
```

4. Find the errors (if any) in the following program assuming that the #define statements are correct. (You may type the program in a file **err.c** and identify the erros during compilation). Modify the code so that it becomes error free.

```
/* There are errors in /*the*/ code.*/
#include <stdio.h>
#define CUBE(X) (X)*(X)*(X)
#define SQ(X)    (X)*(X);
int main()
{
  double Int,x,_x1,2xb,x-y,y3z;
  int Float,char,a,b,c,d,pa@b,qa.b;
  char int,u,_2v,w=t;
  a=2,b=3;
  a+b;
  c=a+b;
  a+b=1;
```

```
  b-a==c;
  d=w;
  a=CUBE(d);
  b=SQ(d)
  u=d+62;
  c=u-1;
  u='y';
  _2v=z;
  y3z=CUBE(c);
  x=SQ(c);
  _x1=SQ(c)*2;
  c=x+u;
  return 0;
}
```