Few basic programs

1. Write a program that calculates Simple Interest for a set of values representing principal (p), number of years (y) and rate of interest (r). The user should supply the input values (p, n and r) through the keyboard during execution.

2. If the total selling price of 15 items and the total profit earned on them is input through the keyboard, write a program to find the cost price of one item.

3. A cashier has currency notes of denominations 10, 50 and 100. If the amount to be withdrawn is input through the keyboard in hundreds, find the total number of currency notes of each denomination the cashier will have to give to the withdrawer.

4. If the marks obtained by a student in five different subjects are input through the keyboard, find out the aggregate marks and percentage marks obtained by the student. Assume that the maximum marks that can be obtained by a student in each subject is 100.

5. In a town, the percentage of men is 52. The percentage of total literacy is 48. If total percentage of literate men is 35 of the total population, write a program to find the total number of illiterate men and women if the population of the town is 80,000.

6. Program to print size of data types.

7. Program to print address of the variables.

8. Program showing examples of typecasting.

9. Evaluate the following, assuming that letters have consecutive character codes.
a. (int)'D' − (int)'A'
b. (char)((int)'C' + 2)
c. (int)'6' − (int)'7'

10. Write a program to convert a temperature in degrees Fahrenheit to degrees Celsius.
celsius = 5/9 (fahrenheit − 32)

11. Express the output of the code snippet;

```
int main() {
printf("%d==%f==%lf\n", 5,  55.5,  55.5);
printf("%i==%e==%E\n",5,  555.5,  123.45);
printf("%o==%g==%G\n",9,   555.5,  123.45);
return 0;
}
```

12. State the output of the code snippet;

```
int main() {
printf("%d==%i==%o==%x\n",32,32,32,32);
printf("%d==%i==%#o==%#x\n",32,32,32,32);
printf("%d==%i==%#o==%#X\n",32,32,32,32);
printf("%+d==%+i==%#o==%#X\n",32,32,032,0x45b);
```

```
return 0;
}
```

13. Predict the output of the given code snippet that illustrates a form of formatted input function scanf.

```
int main() {
 int sr=100, pr=100;
 sr=scanf("Me a scanner");
 pr=printf("scanf returns=%d\n",sr);
 printf("printf returns::%d\n",pr);
 return 0; }
```

14. Predict the output of the given code snippet;

```
int main()
{
int num;
printf("Enter a number:");
scanf("%2d",&num);
printf("number=%d",num);
return 0;
}
```

The inputs are (i) 2345 (ii) 9 (iii) 76 (iv) 456 on different run.