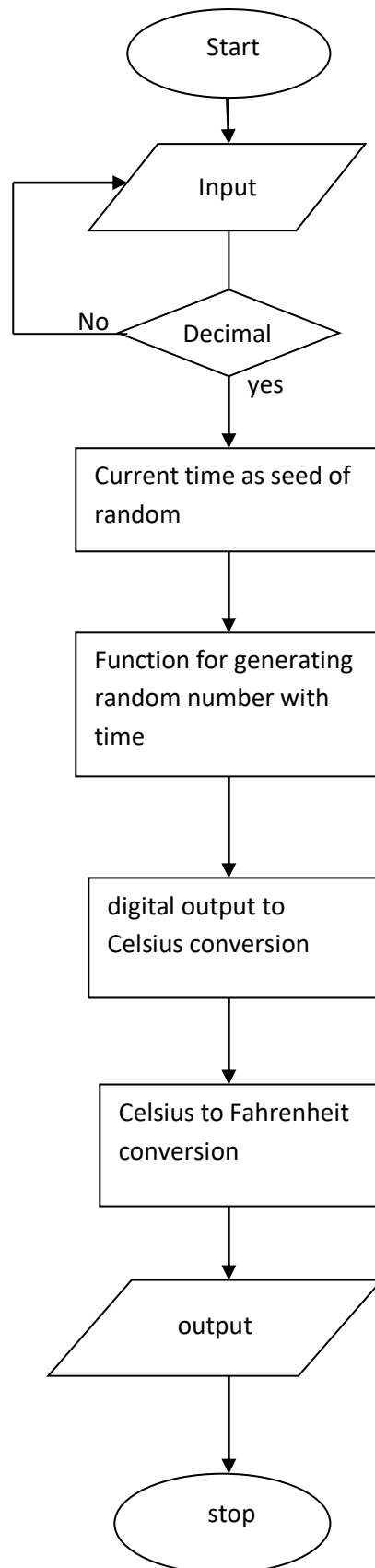


FLOW CHART:



Variables & formula:

1. static int Celsius; **Celsius=((num * 5.0 / 1024) * 100);//.**
2. static int Fahrenheit; **Fahrenheit=((Celsius * 1.8)+ 32);**

Functions:

Two functions used for generating random value in between given range lower and upper using time function.

Documentation:

Step1:taking the ADC value from 10 to 1024 we will get from ADC output continuously from Temperature sensor .

Step2:Taking only 10 samples from the sensor and converting it into Celsius using formula:
Celsius=((num * 5.0 / 1024) * 100);//.

Step3:To convert Celsius to Fahrenheit we have formula : **Fahrenheit=((Celsius * 1.8)+ 32);**

1.8 IS 9/5.

Step4: printing Celsius and Fahrenheit value per 0.1 sec.

Source code:

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#include <time.h>//
```

```
// Generates and prints 'count' random
```

```
// numbers in range [lower, upper].
```

```
void printRandoms(int lower, int upper, int count)//randoms function definition
```

```
{
```

```
    int i,j,time=10;
```

```
    static int Celsius;
```

```
    static int Fahrenheit;
```

```

for(j=0;j<time;j++)
{
for (i = 0; i < count; i++)
{
int num1 = (rand()%(upper - lower + 1)) + lower;//to get random number
int num=num1/5.0; //resaulation
Celsius=((num * 5.0 / 1024) * 100);//converting resulation to celsius formula
Fahrenheit=((Celsius * 1.8 )+ 32); //converting celsius to fahrenheit formula

}

printf("Celsius :%d°C Fahrenheit:%d °F\n",Celsius,Fahrenheit);
}
}

int main()
{
int lower,upper,count = 1;
printf("enter lower range ADC value\n");
scanf("%d",&lower);
printf("enter upper range ADC value\n");
scanf("%d",&upper);

srand(time(0)); //current time as seed of random number generator
printRandoms(lower, upper, count);// function calling

return 0;
}

```