1

```
#include <stdio.h>
#include <stdlib.h>
#include <math.h>
int main()
{
   float *x, mean = 0, med, sd,var;
   int n, i, j, temp;
   printf("Enter the no of items :\t");
   scanf("%d", &n);
   x   = (float *)malloc(sizeof (float) * n);

   /* get n inputs from user */

   for (i = 0; i < n; i++)
   {
      printf("\nEnter your %d no inputs:\t",i+1);
      scanf("%f", &x[i]);
   }
   /* calculate the mean */
   for (i = 0; i < n; i++)
      mean = mean + x[i];
   mean = mean / n;


   /* calculate the variance*/
   for (i = 0; i < n; i++)
      var = var + pow((x[i] - mean), 2);

   var = var / n;

   /* square root of variance is SD */
   sd  = sqrt(var);
   /* sort the given inputs to find median */
   for (i = 0; i < n - 1; i++)
      for (j = i; j < n; j++)
      {
         if (x[i] > x[j])
         {
            temp = x[i];
            x[i] = x[j];
            x[j] = temp;
         }
      }

   /* calculate the median */
   if ((n + 1) % 2 == 0)
   {
      med = x[((n + 1) / 2) - 1];
   }
   else
```

```
    {
        med = (x[((n + 1) / 2) - 1] + x[((n + 2) / 2) - 1]) / 2;
    }

    /* print the outputs */
    printf("\n\n\n\Mean number: %f\n", mean);
    printf("Median number: %f\n", med);
    printf("Standard deviation: %f\n", sd);



    return 0;
}
```
2

```
#include <stdio.h>


void decimalToBinary(int num) {
    if (num == 0) {
        printf("0");
        return;
    }

   int binaryNum[32]; // Assuming 32 bit integer.
   int i=0;

   for ( ;num > 0; ){
      binaryNum[i++] = num % 2;
      num /= 2;
   }

   // Printing array in reverse order.
   for (int j = i-1; j >= 0; j--)
      printf("%d", binaryNum[j]);
}


int main() {
```

```
  int num = 9;
  decimalToBinary(num);
  return 0;
}
```

3

```
#include <stdio.h>
int main()
{

    int arr[] = {1, 2, 8, 3, 2, 2, 2, 5, 1};
    //Calculate length of array arr
    int length = sizeof(arr)/sizeof(arr[0]);
    int fr[length];
    int visited = -1;
    for(int i = 0; i < length; i++){
        int count = 1;
        for(int j = i+1; j < length; j++){
            if(arr[i] == arr[j]){
                count++;
                fr[j] = visited;
            }
        }
        if(fr[i] != visited)
            fr[i] = count;
    }
    printf("---------------------\n");
    printf(" Element | Frequency\n");
    printf("---------------------\n");
    for(int i = 0; i < length; i++){
        if(fr[i] != visited){
            printf("    %d", arr[i]);
```

```
            printf("    |  ");
            printf("  %d\n", fr[i]);
        }
    }
    printf("----------------------\n");
    return 0;
}
```