7.3

**package** demo2;

**import** java.util.Scanner;

**public** **class** helloworld {

**public** **static** **void** main(String[] args) {

Scanner input=**new** Scanner(System.***in***);

System.***out***.print("Enter the integers between 1 and 100: ");

**int** cnt[]=**new** **int** [200];

**int** a;

**for**(**int** i=1;i<=100;i++)cnt[i]=0;

**while**(**true**) {

a = input.nextInt();

**if**(a==0)**break**;

cnt[a]+=1;

}

**for**(**int** i=1;i<=100;i++) {

**if**(cnt[i]==1)

System.***out***.println(i+" occurs "+cnt[i]+" time");

**else** **if**(cnt[i]>1)

System.***out***.println(i+" occurs "+cnt[i]+" times");

}

}

}

7.5

**package** demo2;

**import** java.util.Scanner;

**public** **class** helloworld {

**public** **static** **void** main(String[] args) {

Scanner input=**new** Scanner(System.***in***);

System.***out***.print("Enter 10 numbers: ");

**int** cnt[]=**new** **int** [200];

**int** a[]=**new** **int** [20];

**int** k=0;

**for**(**int** i=1;i<=10;i++) {

a[i] = input.nextInt();

**int** flag=1;

**for**(**int** j=1;j<i;j++)

**if**(a[j]==a[i])flag=0;

**if**(flag==1)

cnt[++k]=a[i];

}

System.***out***.println("The number of distinct number is "+k);

System.***out***.print("The distinct numbers are:");

**for**(**int** i=1;i<=k;i++) {

System.***out***.print(" "+cnt[i]);

}

}

}

8.11

**package** demo2;

**import** java.util.Scanner;

**public** **class** helloworld {

**public** **static** **void** main(String[] args) {

Scanner input=**new** Scanner(System.***in***);

System.***out***.print("Enter a number between 0 and 511: ");

**int** a = input.nextInt();

**int** b[]=**new** **int** [20];

**for**(**int** i=9;i>=1;i--) {

b[i]=a%2;

a/=2;

}

**for**(**int** i=1;i<=9;i++) {

**if**(b[i]==0)

System.***out***.print("H");

**else**

System.***out***.print("T");

**if**(i%3==0)System.***out***.print("\n");

**else** System.***out***.print(" ");

}

}

}