CS 2420
Fall semester section 01
Ricardo Gonzalez Mendez

Chapter 20 programming

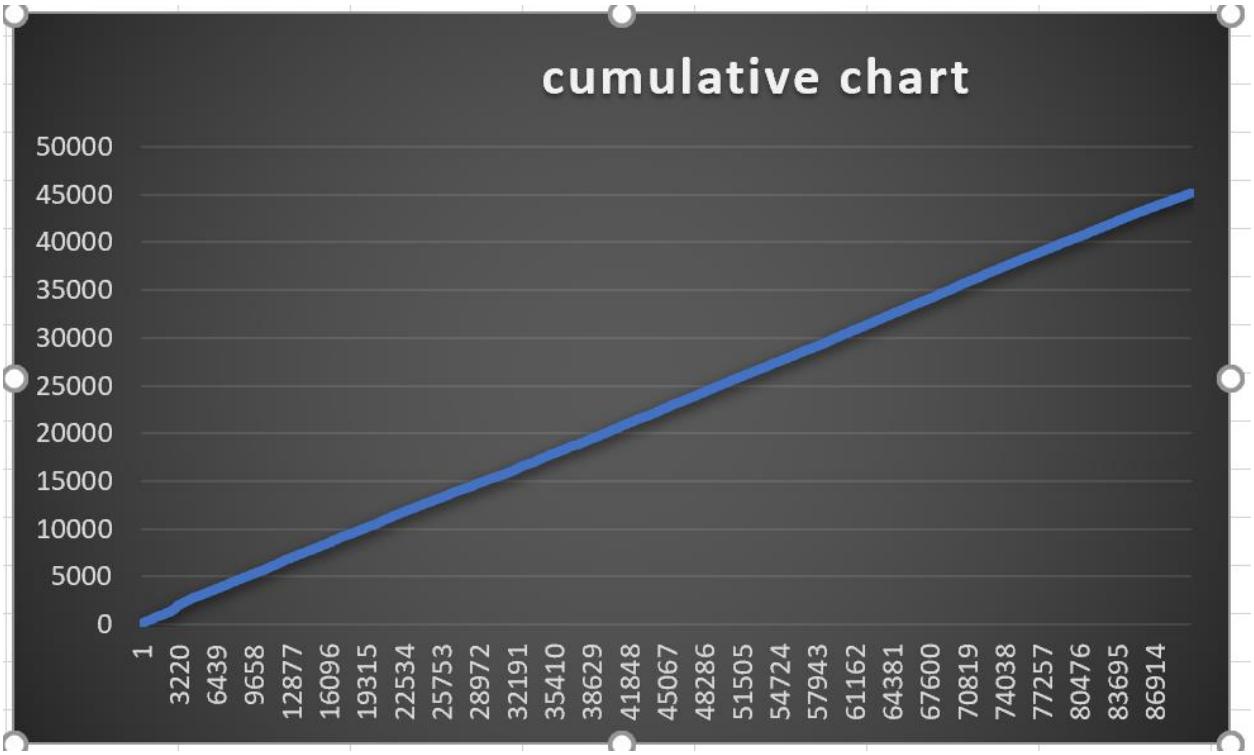
20.12:

```
private int findPos( Object x )
{
    int offset = 1;
    int currentPos = ( x == null ) ? 0 : Math.abs( x.hashCode( ) % array.length );

    while( array[ currentPos ] != null )
    {
        if( x == null )
        {
            if( array[ currentPos ].element == null )
                break;
        }
        else if( x.equals( array[ currentPos ].element ) )
            break;

        currentPos += offset;                  // Compute ith probe
        offset += 1;
        if( currentPos >= array.length )       // Implement the mod
            currentPos -= array.length;
    }

    return currentPos;
}
```

20.17:

```
public static void main(String[] args) throws FileNotFoun
    //TODO Place the code for 20.17 here
    try {
        int fileSize = 48477;
        File file = new File("onlineDictionary.txt");
        Scanner sc = new Scanner(file);
        int tableSize = fileSize*2;
        int [] ts = new int[tableSize];
        while(sc.hasNextLine()) {
            ts[hash(sc.nextLine(), tableSize)]++;
        }
        Formatter out = new Formatter("temp.csv");
        int s = 0;
        for(int i : ts) {
            s += ts[i];
            out.format(s + "\n");
        }
    } catch(FileNotFoundException f) {
        f.printStackTrace();
    }
}
```

CS 2420
Fall semester section 01
Ricardo Gonzalez Mendez



The way I did was with a sum formula in excel to get the cumulative chart. Compared to random it looks like a pretty good distribution.