1. Monte Carlo Simulation
   a. Statement : We want to identify the probability that any two individuals have the same week day as their day of birth. Let us assume, we do not use classical probability.
   Write a code using Monte Carlo simulation method to solve this problem.
   b. Assignment : A project manager approaches to you and says that there is a 90% chance to win full project and rest for part project. There are about 50-100 tasks in each module. Each task can take between 5-10 days . About 10-12 modules if we get part of the project and 20-24 if we get the entire project. The resources vary between 3 to 7 for a module. What is the most likely time to complete the project?

S.NO	item	survivalpoints	weight
1	pocketknife	10	1
2	beans	20	5
3	potatoes	15	10
4	onions	2	1
5	sleeping bag	30	7
6	rope	10	5
7	compass	30	1

2. Genetic Algorithm
   a. Statement : You are going to spend a month in the wilderness. You're taking a backpack with you, however, the maximum weight it can carry is 20 kilograms. You have a number of survivalitems available, each with its own number of "survival points".Your objective is to maximize the number of survivalpoints while selecting the items. Use genetic algorithm to solve this.
   b. Assignment : Write the steps to solve using GA for the following problem :
   You have 100 cities and need to cover all the cities minimizing the distance travelled. A distance between the cities matrix is given.