7. We use a Disjoint-Set Union data structure to efficiently track connected groups of friends. When two people become friends, their respective sets in DSU are merged, effectively combining their (friend circles). Size of combined circle is found by the size of the representative element of the merged set.

2. We use the concept of MST here. Then we employ Kruskal's algo to build the MST. This algorithm greedily adds the cheapest roads that don't create cycles. Then it outputs the total maintenance cost of MST.

9. To begin, there is 1 way to reach step 0 and 1. For any step i, the number of ways to reach it is the sum of ways to reach step (i-1) one jump and step i-2 (two jumps).

5. For each amount, we check if using any available coin reduces the number of coins needed to compared to previously calculated solutions. Then it returns the minimum number of coins needed to make the target amount, or -1 if it's impossible.