

Dynamic Programming

Assignment 01 - report by Frédéric Charon

The given problem is a version of the Coin Change problem. In this case we have a sum $s=1.040.528$ NOK and coins with values of 1, 5, 10 and 20. To solve this problem I used the tabular dynamic programming, which means creating a table where we store for every sum from 0 to s the minimum amount of coins you need to change the sum. In each step we compare the previous entries for each coin and based on that we create the new entry.

I added if-statements to my code where we make sure we're not comparing to elements out of the range of the table.

The result:

To change the sum of 1040528 NOK you need a minimum of 52030 coins