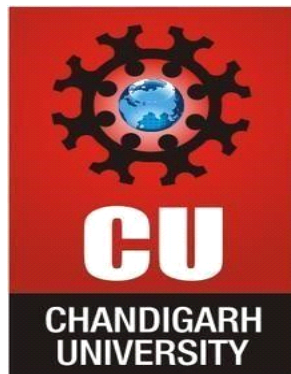


CHANDIGARH UNIVERSITY
UNIVERSITY INSTITUTE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING



Submitted By: Rajiv Paul		Submitted To: Urvashi Malhotra	
Subject Name		Competitive Coding-I	
Subject Code		20CSP-314	
Branch		BE-CSE	
Semester		5 th	

LAB INDEX

Sr. No	Program	Date	Evaluation				Sign
			L W (12)	VV (8)	F W (10)	Tot al (30)	
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.	To solve the hacker rank problems based on Dynamic programming.	27/10/22					
9.							
10.							

EXPERIMENT – 3.1

Student Name:Rajiv Paul

UID:20BCS1812

Branch: CSE

Section/Group: 20BCS_WM_702(A)

Semester: 5th

Date of Performance:27/10/2022

Subject Name: Competitive Coding

Subject Code: 20CSP-314

AIM OF THE EXPERIMENT:

To solve the hacker rank problems based on Dynamic programming.

Problem 1: <https://www.hackerrank.com/challenges/down-to-zero-ii/problem?isFullScreen=true>

1. PROGRAM CODE:

```
import java.io.*;
import java.util.*;

public class Solution {
    static int[] moves = new int[1000001];

    public static void main(String[] args) {
        for (int i = 1; i <= 1000000; ++i) {
            int least = moves[i - 1];
            for (int j = 2; j * j <= i; ++j) {
                if (i % j == 0) {
                    least = Math.min(least, moves[i / j]);
                }
            }
        }
    }
}
```

```

        moves[i] = ++least;
    }
    Scanner in = new Scanner(System.in);
    int t = in.nextInt();
    while (t-- > 0) {
        System.out.println(moves[in.nextInt()]);
    }
}
}
}

```

2. OUTPUT:

Congratulations

You solved this challenge. Would you like to challenge your friends? [f](#) [t](#) [in](#)

[Next Challenge](#)

✔ Test case 0

✔ Test case 1

✔ Test case 2

✔ Test case 3

✔ Test case 4

✔ Test case 5

✔ Test case 6

Compiler Message

Success

Input (stdin)
[Download](#)

1	2
2	3
3	4

Expected Output
[Download](#)

1	3
2	3

Problem 2:

<https://www.hackerrank.com/challenges/truck-tour/problem?isFullScreen=true>

1. PROGRAM CODE:

```
import java.io.*;
import java.util.*;
import java.text.*;
import java.math.*;
import java.util.regex.*;

public class Solution {
    public static void main(String [] args) {
        Scanner in = new Scanner(System.in);
        int n = in.nextInt();
        List<Integer> list = new ArrayList<Integer>();
        int tank = 0;
        int result = -1;
        for(int loop=0; loop<n; loop++) {
            int net = in.nextInt() - in.nextInt();
            if(tank + net > 0) {
                if(result==-1) {
                    result = loop;
                }
                list.add(net);
            }
        }
    }
}
```

```

        tank += net;
    } else {
        list.clear();
        tank = 0;
        result = -1;
    }
}

System.out.println(result);
in.close();
}
}

```

2. OUTPUT:

Congratulations

You solved this challenge. Would you like to challenge your friends? [f](#) [t](#) [in](#)

[Next Challenge](#)

✓ Test case 0

✓ Test case 1

✓ Test case 2

✓ Test case 3

✓ Test case 4

✓ Test case 5

✓ Test case 6

Compiler Message

Success

Input (stdin) [Download](#)

1	3
2	1 5
3	10 3
4	3 4

Expected Output [Download](#)

1	1
---	---