



**ਆਈ. ਕੇ. ਗੁਜਰਾਲ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ, ਕਪੂਰਥਲਾ**  
**I.K. GUJRAL PUNJAB TECHNICAL UNIVERSITY JALANDHAR, KAPURTHALA**  
**Office of Corporate Relations & Alumni**

Ref. No. IKGPTU/CRA/238.....

Dated.. Dec/23/2022

Directors/ Principals  
All the University Campuses/ Colleges& Institutions  
Affiliated with IKG PTU

**Sub: Infosys Off -Campus Recruitment Drive.**

**Dear Sir/ Madam**

I K Gujral Punjab Technical University invite students of its campuses and affiliated colleges to participate in Infosys Off -Campus Recruitment Drive for 2020, 2021 & 2022 batch passed out students as per the below mentioned details:-

Designation	:	Specialist Programmer
Salary Package	:	INR 9.50 LPA
Course/Stream	:	B.Tech/M.Tech (CSE/CoE/SE/ECE/EEE/IT/Electronics and Telecommunication Engineering/Information Science & Engineering) M.Sc (IT/ Maths/Computing) &MCA(5 years integrated)
Batch Eligible	:	2020, 2021, 2022 Passed out
Eligibility Criteria	:	Details attached
Registration Last Date	:	January 13, 2023
Selection Process	:	Online Test & Virtual Interview (Infosys online test samples are attached)
Registration Link	:	<a href="#">Infosys Off-campus Recruitment Drive - SP and DSE</a>

You are requested to please direct the Training & Placement Officer of your College/Institute to circulate the information to all the concerned passed out students.

For any queries you may call the undersigned @ +91-9478098076.

With profound regards,

*Ms Bedi*  
23/12/22  
Assistant Director (CR&A)

**“Propelling Punjab to a prosperous Knowledge Society”**

**I.K. Gujral Punjab Technical University**

Jalandhar-Kapurthala Highway, Kapurthala -144 603. Phone : 01822-282506

**E-mail** : placements.ptu@gmail.com **Website** : www.ptu.ac.in

# INFOSYS CAMPUS RECRUITMENT PROGRAM

## For the role of Systems Engineer

### Eligibility criteria

Engineers (B.E./BTech/M.E./MTech) from all disciplines as well as MCA/MSc (Computer Science/Electronics/Mathematics/Physics/Statistics) are eligible to apply subject to their meeting the following academic criteria.

Class X	Class XII	Diploma (if applicable)	B.E./BTech	M.E./MTech
60% or equivalent	60% or equivalent	65%	65%	Not applicable
60% or equivalent	60% or equivalent	65%	6 (on 10)	Not applicable
60% or equivalent	60% or equivalent	65%	65%	65%
60% or equivalent	60% or equivalent	65%	6 (on 10)	65%
60% or equivalent	60% or equivalent	65%	65%	6 (on 10)

- All percentages/CGPA should be simple average for all subjects/semesters/years, including electives, optional subjects, additional subjects, practical subjects, and languages.
- In case the candidate has done both Class XII and Diploma, the best of the two is taken into consideration.
- No active backlogs are allowed.
- Candidate should be willing to relocate to any location as required by Infosys.
- Candidate should be willing to work in different technologies as required by Infosys.

## Samples of Infosys Online Test

### Sample Test 1

- While playing an RPG game, you were assigned to complete one of the hardest quests in this game. There are  $n$  monsters you'll need to defeat in this quest. Each monster  $i$  is described with two integer numbers - **power** <sub>$i$</sub>  and **bonus** <sub>$i$</sub> . To defeat this monster, you'll need at least **power** <sub>$i$</sub>  experience points. If you try fighting this monster without having enough experience points, you lose immediately. You will also gain **bonus** <sub>$i$</sub>  experience points if you defeat this monster. You can defeat monsters in any order.

The quest turned out to be very hard - you try to defeat the monsters but keep losing repeatedly. Your friend told you that this quest is impossible to complete. Knowing that, you're interested, what is the maximum possible number of monsters you can defeat? (*Question difficulty level: Hardest*)

#### Input:

The first line contains an integer,  $n$ , denoting the number of monsters.

The next line contains an integer,  $e$ , denoting your initial experience.

Each line  $i$  of the  $n$  subsequent lines (where  $0 \leq i < n$ ) contains an integer,  $power_i$ , which represents power of the corresponding monster.

Each line  $i$  of the  $n$  subsequent lines (where  $0 \leq i < n$ ) contains an integer,  $bonus_i$ , which represents bonus for defeating the corresponding monster.

#### Sample cases:

Input	Output	Output description
2 123 78 130 10 0	2	Initial experience level is 123 points.  Defeat the first monster having power of 78 and bonus of 10. Experience level is now $123+10=133$ .  Defeat the second monster.
3 100 101 100 304 100 1 524	2	Initial experience level is 100 points.  Defeat the second monster having power of 100 and bonus of 1. Experience level is now $100+1=101$ .  Defeat the first monster having power of 101 and bonus of 100. Experience level is now $101+100=201$ .  The third monster can't be defeated.

- Unique Birthday Gift**

Your birthday is coming soon and one of your friends, Alex, is thinking about a gift for you. He knows that you really like integer arrays with interesting properties.

He selected two numbers, **N** and **K** and decided to write down on paper all integer arrays of length **K** (in form **a[1], a[2], ..., a[K]**), where every number **a[i]** is in range from **1** to **N**, and, moreover, **a[i+1]** is divisible by **a[i]** (where  $1 < i \leq K$ ), and give you this paper as a birthday present.

Alex is very patient, so he managed to do this. Now you're wondering, how many different arrays are written down on this paper?

Since the answer can be really large, print it **modulo 10000**.

**Input:**

The first line contains an integer, **n**, denoting the maximum possible value in the arrays.

The next line contains an integer, **k**, denoting the length of the arrays.

**Sample cases:**

Input	Output	Output description
2 1	2	The required length is 1, so there are only two possible arrays: [1] and [2].
2 2	3	All possible arrays are [1, 1], [1, 2], [2, 2]. [2, 1] is invalid because 1 is not divisible by 2.
3 2	5	All possible arrays are [1, 1], [1, 2], [1, 3], [2, 2], [3, 3].

## Sample Test 2

- Bitwise subsequence**

You have an array **A** of **N** integers **A<sub>1</sub> A<sub>2</sub> .. A<sub>n</sub>**. Find the longest increasing subsequence **A<sub>i1</sub> A<sub>i2</sub> .. A<sub>ik</sub>** ( $1 \leq k \leq N$ ) that satisfies the following condition:

For every adjacent pair of numbers of the chosen subsequence **A<sub>i[x]</sub>** and **A<sub>i[x+1]</sub>** ( $1 < x < k$ ), the expression  $(A_{i[x]} \& A_{i[x+1]}) * 2 < (A_{i[x]} | A_{i[x+1]})$  is true

**Note:** '&' is the bitwise AND operation, '|' is the bit-wise OR operation

**Input:**

The first line contains an integer, **N**, denoting the number of elements in **A**.

Each line **i** of the **N** subsequent lines (where  $0 \leq i < N$ ) contains an integer describing **A<sub>i</sub>**.

**Sample cases:**

Input	Output	Output description
5 15 6 5 12 1	2	One possible subsequence is: 5 12

6 9 17 2 15 5 2	2	One possible subsequence is: 2 15
7 17 16 12 2 8 17 17	3	One possible subsequence is: 2 8 17

- **Grid Path**

Given a grid. Each cell of the grid contains a single integer value. These values are described by 2D integer array **a** with **N** rows and 2 columns, where **a[i][j]** is the value in the cell located in row **i**, column **j**.

Standing in **(i; j)**, the player can move to any cell of the next row **(i+1; j2)** under the condition that **a[i+1][j2] > a[i][j]**. In other words, the value in the next cell of the player's path should be strictly greater than the value in the current cell of the player's path.

The player can't make any moves if he's already in the last row.

If the player starts in any cell of the first row (either **(1; 1)** or **(1; 2)**), what is the maximum possible total sum of values in all cells he can visit on his path?

Print the answer **modulo 10<sup>9</sup>+7**.

**Input:**

The first line contains an integer, **n**, denoting the number of rows in **a**.

The next line contains an integer, **2**, denoting the number of columns in **a**.

Each line **i** of the **n** subsequent lines (where  $0 \leq i < n$ ) contains 2 space separated integers each describing the row **a[i]**.

**Sample cases:**

Input	Output	Output description
2 1 2 3 4	6	Optimal path is (1;2)->(2;2). The answer is 2+4=6.
2 7 8 5 5	8	No moves are possible from the first row. So start in (1; 2) and collect just 8.

3 1 1 2 2 3 3	6	One of the optimal paths is (1;1)->(2;1)->(3;1). The answer is $1+2+3=6$ .
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