

# MSIT HONOR CODE

Academic integrity is important to MSIT and our partner universities. Your commitment to academic integrity shows respect for your own work and the work of your peers.

By enrolling in MSIT program, I agree that I will:

1. Complete all instructional activities such as tasks, quizzes, projects, assignments, etc., on my own, unless collaboration on an assignment is explicitly permitted.
2. Maintain only one user account and not let anyone else use my username and/or password.
3. Not engage in any activity that would dishonestly improve my results, or improve or hurt the results of others.
4. Not post answers to problems that are being used to assess learner performance.
5. Not share your solutions to homework, quizzes, or exams with anyone else unless explicitly permitted by the instructor. This includes anything written by you, as well as any official solutions provided by the course staff.

## Plagiarism

1. Plagiarism is when you copy words, ideas, or any other materials from another source without giving credit. Plagiarism is unacceptable in an academic environment and is a serious violation of MSIT Honor Code.
2. If some or all of your assignment is identified as plagiarism, you may lose all the credit you received for the assignment. And if you earned a grade for that course, it may be taken away.
3. We understand our learners come from many different academic backgrounds, and many are unfamiliar with our academic standard for plagiarism. This violation of our policies may have been a one time mistake, but if you are found repeatedly plagiarizing, you may be removed from the program.

## VIOLATIONS

If you are found in violation of the Honor Code, you may be subject to one or more of the following actions:

1. Receiving a zero or no credit for an assignment;
2. Having any certificate/degree earned in the course or program withheld or revoked;
3. Being unenrolled from a course or program; or
4. Additional actions may be taken at the sole discretion of MSIT and IIIT Hyderabad.

No refunds will be issued in the case of any corrective action for such violations.

Honor Code violations will be determined at the sole discretion of MSIT. You will be notified if a determination has been made that you have violated this Honor Code and you will be informed of the corresponding action to be taken as a result of the violation.

# Connectivity

To reduce the pollution and traffic on roads, it is decided to build a New Metro that connects all the important circles of Hyderabad. As it is very costly to construct a Metro, it is decided to optimize the cost but all circles to be connected. Given possible metro routes with costs, compute the optimized cost of New Metro and metro routes to connect all the circles.

There will be  $n$  circles and  $k$  routes joining them.

## Input format

1. First line of input will contain 2 positive integers  $n$  and  $k$ , where  $n$  is the number of circles and  $k$  is the no. of possible routes connecting the circles. Circles are numbered 1 to  $n$ .
2. Next  $k$  lines contain 3 positive integers  $x$ ,  $y$ ,  $z$  each denoting a route between  $x$ ,  $y$  with cost  $z$ .

## Output Format

1. Print the total cost to construct the New Metro.

## Sample Input

```
7 10
1 2 5
1 4 3
1 5 12
1 6 5
4 5 1
5 6 2
5 3 1
3 6 16
4 7 1
2 4 1
```

## Sample Output

```
9
```