**PERMUTATION & COMBINATION**

CASE\_3:

StudySprings consists of 55 resources among which 20 are women and 35 are men. The company has planned to organize an official trip to VJCETE for a workshop on Machine Learning. As it would enhance the productivity on further projects, it is necessary to pick candidates who are efficient and productive. So, 2 teams has been chosen from the employee's list based upon certain criteria. From this list, 6 trainers need to be chosen finally. So, Create a program to find the combination of employees as follows, from the employees list generated based upon the given constraints.

a) The eligible employees list who can be sent to the training consists of 2 teams with 10 employees in each.

b) Each team consists of 5 men and 5 women.

c) Among them, 1 man and 2 women from the first team and 2 men and 1 woman from the second team has to be chosen for the training. Find the number of combinations of trainers and then generate the list of combinations so that it would be easier to choose the best team that would go for the official trip.

INPUT:

Consider the names of those 10 employees from

Team1 as:

{Madhuri(F), Nihitha(F), Jothi(F), Heleena(F), Remya(F), Sam(M), Praveen(M), Lenin(M), Balaji(M) and Harini(F)}

Team2 as:

{Monisha(F), Praveena(F), Keerthana(F), joseline(F), deepika(F), ashick(M), srivatsan(M), prashanth(M), aneesh(M), fayaz(M)}.

Note: M indicates Male and F indicates Female.

OUTPUT:

Number of possible combinations are: 30

Possibility Number 1: Sam, Jothi, Nihitha, Monisha, Prashanth, Srivatsan

Possibility Number 2: Sam, Heleena, Nihitha, Monisha, Aneesh, Srivatsan

Possibility Number 3: Sam, Heleena, Jothi, Monisha, Aneesh, Prashanth

Possibility Number 4: Sam, Remya, Nihitha, Monisha, Fayaz, Srivatsan

Possibility Number 5: Sam, Remya, Jothi, Monisha, Fayaz, Prashanth

Possibility Number 6: Sam, Remya, Heleena, Monisha, Fayaz, Aneesh

Possibility Number 7: Praveen, Jothi, Nihitha, Praveena, Prashanth, Srivatsan

Possibility Number 8: Praveen, Heleena, Nihitha, Praveena, Aneesh, Srivatsan

Possibility Number 9: Praveen, Heleena, Jothi, Praveena, Aneesh, Prashanth

Possibility Number 10: Praveen, Remya, Nihitha, Praveena, Fayaz, Srivatsan

Possibility Number 11: Praveen, Remya, Jothi, Praveena, Fayaz, Prashanth

Possibility Number 12: Praveen, Remya, Heleena, Praveena, Fayaz, Aneesh

Possibility Number 13: Lenin, Jothi, Nihitha, Keerthana, Prashanth, Srivatsan

Possibility Number 14: Lenin, Heleena, Nihitha, Keerthana, Aneesh, Srivatsan

Possibility Number 15: Lenin, Heleena, Jothi, Keerthana, Aneesh, Prashanth

Possibility Number 16: Lenin, Remya, Nihitha, Keerthana, Fayaz, Srivatsan

Possibility Number 17: Lenin, Remya, Jothi, Keerthana, Fayaz, Prashanth

Possibility Number 18: Lenin, Remya, Heleena, Keerthana, Fayaz, Aneesh

Possibility Number 19: Balaji, Jothi, Nihitha, joseline, Prashanth, Srivatsan

Possibility Number 20: Balaji, Heleena, Nihitha, joseline, Aneesh, Srivatsan

Possibility Number 21: Balaji, Heleena, Jothi, joseline, Aneesh, Prashanth

Possibility Number 22: Balaji, Remya, Nihitha, joseline, Fayaz, Srivatsan

Possibility Number 23: Balaji, Remya, Jothi, joseline, Fayaz, Prashanth

Possibility Number 24: Balaji, Remya, Heleena, joseline, Fayaz, Aneesh

Possibility Number 25: Pranay, Jothi, Nihitha, deepika, Prashanth, Srivatsan

Possibility Number 26: Pranay, Heleena, Nihitha, deepika, Aneesh, Srivatsan

Possibility Number 27: Pranay, Heleena, Jothi, deepika, Aneesh, Prashanth

Possibility Number 28: Pranay, Remya, Nihitha, deepika, Fayaz, Srivatsan

Possibility Number 29: Pranay, Remya, Jothi, deepika, Fayaz, Prashanth

Possibility Number 30: Pranay, Remya, Heleena, deepika, Fayaz, Aneesh