**AA\_LAB\_11\_Assignment**

**CE\_054**

**Aim :-** Greedy approach of set cover algorithm.

1. Greedy Set Cover Algorithm in python.

Code :-

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def set\_cover(lst, edge):

U = lst.copy()

    all = []

    while len(U) != 0:

        s = findIntersaction(edge, U)

        edge.remove(s)

        U = [x for x in U if x not in s]

        all.append(s)

    return all

def findIntersaction(edge, u):

index, max = 0, 0

    for i in range(len(edge)):

        temp = set(edge[i]).intersection(set(u))

        if len(temp) > max:

            max = len(temp)

            index = i

    return edge[index]

if \_\_name\_\_ == "\_\_main\_\_":

lst = list(map(int, input().split()))

    subsets = int(input("Enter number of subsets\n"))

    edge = []

    for \_ in range(subsets):

        temp = list(map(int, input().split()))

        edge.append(temp)

        result = set\_cover(lst, edge)

    print(result)

Output :-



