Central Department

of

Computer Science and Information Technology

Tribhuvan University

Lab Report

On

Implementation of Height, Core, Boundary and Support in Fuzzy set

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#3

CODE:

```
#Lab 3 Implementation of Height, Core, Boundary and Support
def enter(name):
    list={}
    n=int(input("Enter the number of elements in set"+name))
    for i in range(n):
        name=input("Enter the name: ")
        while 1:
            value=float(input("Enter the value: "))
            if(value>=0 and value<=1):
                list[name]=value
                break;
            else:
                print("Value must be >= 0 and <=1")
    return list
def Height(A):
    all_values = A.values()
    max_value = max(all_values)
    return max_value

def Support(A):
    support=[]
    for A_key in A:
        A_value = A[A_key]
        if A_value>0:
            support.append(A_key)
    return support

def Core(A):
    core=[]
    for A_key in A:
        A_value = A[A_key]
        if A_value==1:
            core.append(A_key)
    return core

def Boundary(A):
    b=[]
    for A_key in A:
        A_value = A[A_key]
        if A_value<1 and A_value>0:
            b.append(A_key)
    return b
```

```
A=enter("A")
print("The set given is:",A)
print("-------------------------------------")
print("The height of given set A is:",Height(A))
print("The Support of given set A is:",Support(A))
print("The Core of given set A is:",Core(A))
print("The Boundary of given set A is:",Boundary(A))
```

OUTPUT

```
Enter the number of elements in setA5
Enter the name: a
Enter the value: 0.3
Enter the name: b
Enter the value: 1
Enter the name: c
Enter the value: 0
Enter the name: d
Enter the value: 0.5
Enter the name: e
Enter the value: 0.8
The set given is: {'a': 0.3, 'b': 1.0, 'c': 0.0, 'd': 0.5, 'e': 0.8}
-------------------------------------
The height of given set A is: 1.0
The Support of given set A is: ['a', 'b', 'd', 'e']
The Core of given set A is: ['b']
The Boundary of given set A is: ['a', 'd', 'e']
```