Lab 2

Python

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Question1:

Code:

```python
num = int(input('Enter number of students: '))
stu_list = []
for i in range(num):
    stu_tuple = [input('Enter name of student %s: '%(i+1)), int(input('Enter age : ')), float(input('Enter height : '))]
    stu_list.append(tuple(stu_tuple))
print('\nStudents list    : ',stu_list)
print('\nSorted by NAME   : ', sorted(stu_list, key=lambda x: x[0]))
print('\nSorted by AGE    : ', sorted(stu_list, key=lambda x: x[1]))
print('\nSorted by HEIGHT : ', sorted(stu_list, key=lambda x: x[2]))
```

Output:

```
PS C:\Users\DELL\OneDrive\Desktop\Labs> python -u "c:\Users\DELL\OneDrive\Desktop\Labs\IIIT PUNE LABS\3 Third Sem\Python\LAB 2\LAB_2_Q1.py"
Enter number of students: 5
Enter name of student 1: Tony
Enter age : 20
Enter height : 6.0
Enter name of student 2: Steve
Enter age : 19
Enter height : 5.7
Enter name of student 3: Natasha
Enter age : 16
Enter height : 5.2
Enter name of student 4: Bruce
Enter age : 18
Enter height : 5.8
Enter name of student 5: Chris
Enter age : 21
Enter height : 6.1

Students list    :  [('Tony', 20, 6.0), ('Steve', 19, 5.7), ('Natasha', 16, 5.2), ('Bruce', 18, 5.8), ('Chris', 21, 6.1)]

Sorted by NAME   :  [('Bruce', 18, 5.8), ('Chris', 21, 6.1), ('Natasha', 16, 5.2), ('Steve', 19, 5.7), ('Tony', 20, 6.0)]

Sorted by AGE    :  [('Natasha', 16, 5.2), ('Bruce', 18, 5.8), ('Steve', 19, 5.7), ('Tony', 20, 6.0), ('Chris', 21, 6.1)]

Sorted by HEIGHT :  [('Natasha', 16, 5.2), ('Steve', 19, 5.7), ('Bruce', 18, 5.8), ('Tony', 20, 6.0), ('Chris', 21, 6.1)]
PS C:\Users\DELL\OneDrive\Desktop\Labs>
```

Question2:

Code:

```python
rows = int(input('Enter number of rows : '))
for x in range(1, rows+1):
    print(' '*(rows+1-x), '* '*(x), sep='')
```

Output:

```
PS C:\Users\DELL\OneDrive\Desktop\Labs> python -u "c:\Users\DELL\OneDrive\Desktop\Labs\IIIT PUNE LABS\3 Third Sem\Python\LAB 2\LAB_2_Q2.py"
Enter number of rows : 12
            *
           * *
          * * *
         * * * *
        * * * * *
       * * * * * *
      * * * * * * *
     * * * * * * * *
    * * * * * * * * *
   * * * * * * * * * *
  * * * * * * * * * * *
 * * * * * * * * * * * *
PS C:\Users\DELL\OneDrive\Desktop\Labs>
```

```
PS C:\Users\DELL\OneDrive\Desktop\Labs> python -u "c:\Users\DELL\OneDrive\Desktop\Labs\IIIT PUNE LABS\3 Third Sem\Python\LAB 2\LAB_2_Q2.py"
Enter number of rows : 5
     *
    * *
   * * *
  * * * *
 * * * * *
PS C:\Users\DELL\OneDrive\Desktop\Labs>
```