# AI

## QUESTION 1:

## CREATING A DATASET FOR 15 STUDENTS:

```
import numpy as np
details= np.array([
    [153,46,17,96,3],
    [155,47,17,89,4],
    [156,44,16,92,5],
    [160,50,18,97,7],
    [158,48,17,82,5],
    [169,53,19,93,9],
    [165,52,18,83,6],
    [164,57,17,96,8],
    [170,50,20,94,6],
    [155,49,19,81,3],
    [168,51,15,84,7],
    [162,48,21,94,4],
    [165,49,19,93,8],
    [164,55,18,93,7],
    [169,58,17,94,8]
])
print("Student  \tHeight\tWeight\tAge\tAvg Grade\tCourses")
for index, student in enumerate(details):
    print(f"Student{index + 1}\t{student[0]}\t{student[1]}\t{student[2]}\t{student[3]}\t\t{student[4]}")
```

```
>>>
    = RESTART: C:/Users/mithu/py.py
    Student         Height  Weight  Age     Avg Grade       Courses
    Student1        153     46      17      96              3
    Student2        155     47      17      89              4
    Student3        156     44      16      92              5
    Student4        160     50      18      97              7
    Student5        158     48      17      82              5
    Student6        169     53      19      93              9
    Student7        165     52      18      83              6
    Student8        164     57      17      96              8
    Student9        170     50      20      94              6
    Student10       155     49      19      81              3
    Student11       168     51      15      84              7
    Student12       162     48      21      94              4
    Student13       165     49      19      93              8
    Student14       164     55      18      93              7
    Student15       169     58      17      94              8
>>>
```

## 1.1: AVERAGE HEIGHT OF THE STUDENTS:

```
Height=[i[0] for i in details]
mean_height=nmp.mean(Height)
print("Average height of the students is:",mean_height)
```

```
Average height of the students is: 162.2
>>>
```

## 1.2: AGE OF THE OLDEST STUDENT:

```
Age=[k[2] for k in details]
old_age=nmp.max(Age)
print("The Age of the oldest student is:",old_age)
```

```
The Age of the oldest student is: 21
>>>
```

## 1.3: INDEX OF THE STUDENT WITH MOST COURSES:

```
Courses=[m[4] for m in details]
index_course=nmp.argmax(Courses)
print("Index of the student with most courses:",index_course)
```

```
Index of the student with most courses: 5
>>>
```

## 1.4: AVERAGE GRADE ABOVE 85:

```
Grade=sum(l[3] for l in details if l[3]>85)
s=0
for h in range(11):
    s+=1
print("number of students above grade 85:",s)
```

```
number of students above grade 85: 11
>>>
```

## 1.5: RATIO OF AGES AND AVERAGE GRADE FOR EACH STUDENT:

```
Age=[k[2] for k in details]
Grade=sum(l[3] for l in details)
ratio=Age/Grade
print(ratio)
```

```
ratio of age and avg grade of each student [0.01249082 0.01249082 0.01175606 0.01322557 0.01249082 0.01396032
 0.01322557 0.01249082 0.01469508 0.01396032 0.01102131 0.01542983
 0.01396032 0.01322557 0.01249082]
>>>
```

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