

# FIRST SEMESTER MCA (2020 SCHEME)

PRACTICAL EXAMINATION JUNE-2021

20MCA131 PROGRAMMING LAB

DATE: 02/07/2021

TIME: 9.30 AM - 12.30 PM

Submitted by,

ICE 20MCA-2004

Batch-A

1. Generate a list of four digit numbers in a given range with all their digits even and the number is a perfect square.

## Algorithm

Step 1: Start

~~Step 2: Read two numbers from user and store it in two variable a, b.~~

Step 2: Read Starting index and ending index from user and store it in two variables a and b.

Step 3: Find square of all numbers selected in starting index to End index. ~~Using for~~

Step 4: check product of square root of number is same as that number then store the number in a variable n.

Step 5: Take last digit of that number using  $n \% 10$  ~~and~~ find remainder of  $n$

Step 6: check the remainder of integer division of  $n$  by 2. That is not equal to zero (odd) then break.

Step 7: other wise Print that number (~~even~~) i.e., even

Step 8 : repeat step 5, 6, 7 while ~~given~~ <sup>while</sup>  $n \neq 0$ . get list of  
~~Step 9 : stop~~ Step four digit numbers in a given range  
 with all their digits even and the number is  
 Perfect square.

Step 10 : Stop.

### Program

```
import math
a = int(input("Enter Starting index:"))
b = int(input("Enter ending index:"))
for i in range(a, b):
    num = int(math.sqrt(i))
    num
    if (num * num == i):
        n = i
        while n != 0:
            r = n % 10
            n = n // 10
            if r % 2 != 0:
                break
        else:
            print(i)
```

### Predicted output

```
Enter Starting index : 1000
Enter ending index : 10000
4624
6084
6400
8464
```

### Actual output

```
Starting index : 4000
Ending index : 50000
4624
6084      40000
6400      40804
8464      48400
26244
28224
40000
```

2. write a Python Program to ~~print each row~~ read each row from a given csv file and print a list of strings.

### Algorithm

- Step 1: Start
- Step 2: import CSV
- Step 3: using with open function open saved csv file in read mode. as required file name.
- Step 4: read all data in that csv file and store it in a variable, readers.
- Step 5: ~~store~~ check ~~each~~ all row in readers using for loop
- Step 6: Print each row.
- Step 7: Stop.

### output

csv file  
Student.csv

Rollno	Name	subject	mark
1	Airwarya	maths	45
2	Anjana	Physics	49
3	Devika	English	52
4	Havi	Physics	50
5	Jos	chemistry	52
6	Kiran	Biology	47
7	Murthula	Hindi	55

### Program output

```
[ 'Rollno', 'Name', 'subject', 'mark' ]  
[ '1', 'Aiswarya', 'maths', '45' ]  
[ '2', 'Anjana', 'Physics', '49' ]  
[ '3', 'Devika', 'English', '52' ]  
[ '4', 'Havi', 'physics', '50' ]  
[ '5', 'Jos', 'chemistry', '52' ]  
[ '6', 'Kiran', 'Biology', '47' ]  
[ '7', 'myithule', 'Hindi', '55' ]
```

### Program

```
import csv  
with open("Student.csv", "r") as file1:  
    reader1 = csv.reader(file1)  
    for row in reader1:  
        print(row)
```

### Actual output

```
[ 'Rollno', 'Name', 'subject', 'mark' ]  
[ '1', 'Aiswarya', 'maths', '45' ]  
[ '2', 'Anjana', 'physics', '49' ]  
[ '3', 'Devika', 'English', '52' ]  
[ '4', 'Havi', 'physics', '50' ]  
[ '5', 'Jos', 'chemistry', '52' ]  
[ '6', 'Kiran', 'Biology', '47' ]  
[ '7', 'myithule', 'Hindi', '55' ]
```