```python
# leap year

def isLeapYear(year):
    if(year % 4 == 0 and year % 100 != 0) or year % 400 == 0:
        return True
    else:
        return False

year=int(input(" enter a year: "))
if isLeapYear(year):
    print('{} is a leap year.'.format(year))
else:
    print('{} is not a leap year.'.format(year))
```

```python
#1.1 implement a recursive function to calculate the factorial of a given number


def fact_rec(n):
    if n == 0 or n == 1:
        return 1
    else:
        return n * fact_rec(n - 1)


number = int(input("enter a value : "))
res = fact_rec(number)

print("the factorial of {} is {}.".format(number, res))

```