ICP2 Report

1.

```
class Counter:
    count = 0

    def __init__(self):
        self._count = 0

    def increment(self):
        self._count +=1
        Counter.count +=1

    def get_counts(self):
        return f"Instance count: {self._count}, Class count: {Counter.count}"

#self._count is an instance variable specific to each Counter object
#Counter.count is a class variable shared across all instances of Counter class
a = Counter()
b = Counter()

a.increment()
a.increment()
b.increment()
#increment method increases the count instance variable for that instance
#                increases the count of class variable regardless of which variable

print(a.get_counts())
print(b.get_counts())
```

```
Instance count: 2, Class count: 3
Instance count: 1, Class count: 3
```

2.

```
def sum_all(args):
    return sum(args)

print("Sum of 1,2,3, is:" ,sum_all([1, 2, 3]))
print("Sum of 4,5,6,7 is:" ,sum_all([4,5,6,7]))
```

```
Sum of 1,2,3, is: 6
Sum of 4,5,6,7 is: 22
```

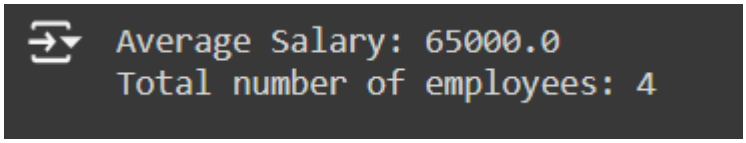
3.

```python
def main():
   students=['Mary','Zelda','Jimmy','Jack','Bartholomew','Gertrude']
   first_word(students)

def first_word(st):
  st.sort()
  print(st[0])

main()
```

```
Bartholomew
```

4.

```python
class Employee:
  count_employee=0;

  def __init__(self,name,salary,family,department):
    self.name=name
    self.salary=salary
    self.family=family
    self.department=department
    Employee.count_employee +=1

  def average_salary(self,employees):
    if not employees:
      return 0
    total_salary = sum(empl.salary for empl in employees)
    return total_salary / len(employees)

class FulltimeEmployee(Employee):
  def __init__(self,name,salary,family,department):
    super().__init__(name,salary,family,department)

empl1 = Employee("Sahitha",80000,"Koppula","Data Analytics")
empl2 = Employee("Jungkook",70000,"Jeon","Marketing")
empl3 = Employee("Taehyung",60000,"Kim","Sales")
fulltime_emp = FulltimeEmployee("Namjoon",50000,"Kim","HR")

employees = [empl1,empl2,empl3,fulltime_emp]
#Calculation of average salary
print(f"Average Salary: {fulltime_emp.average_salary(employees)}")

#Total number of employees
print(f"Total number of employees: {Employee.count_employee}")
```



Youtube video Link:-
https://www.youtube.com/watch?v=yD5GOtWAn2M

Github Link:- https://github.com/Ksahitha/BDA.git