DATABASE SYSTEM LABS - ADVANCED SQL: PROCEDURE & FIGURE

李旭东

LEEXUDONG@NANKAI.EDU.CN

NANKAI UNIVERSITY

OBJECTIVES

- PROCEDURE
- Drawing Figure In Python
- A Lab

PROCEDURE EXAMPLE

EXAMPLE: MYSQL PROCEDURE

```
DROP PROCEDURE IF EXISTS sp_proc_instructor;
DELIMITER ;;
CREATE PROCEDURE sp_proc_instructor(IN deptName varchar(20), OUT cnt int)
BEGIN
   IF deptName is null THEN
    select count(*) into cnt   from instructor;
      ELSE
    select count(*) into cnt  from instructor where dept_name=deptName;
   END IF;
 /* select * from instructor where dept_name=deptName; */
END;;
DELIMITER ;
```

EXAMPLE: MYSQL PROCEDURE

```
set @deptName='Comp. Sci.';
call sp_proc_instructor(@deptName,@mycnt);
select @mycnt as cnt;
```

Drawing Figure In Python

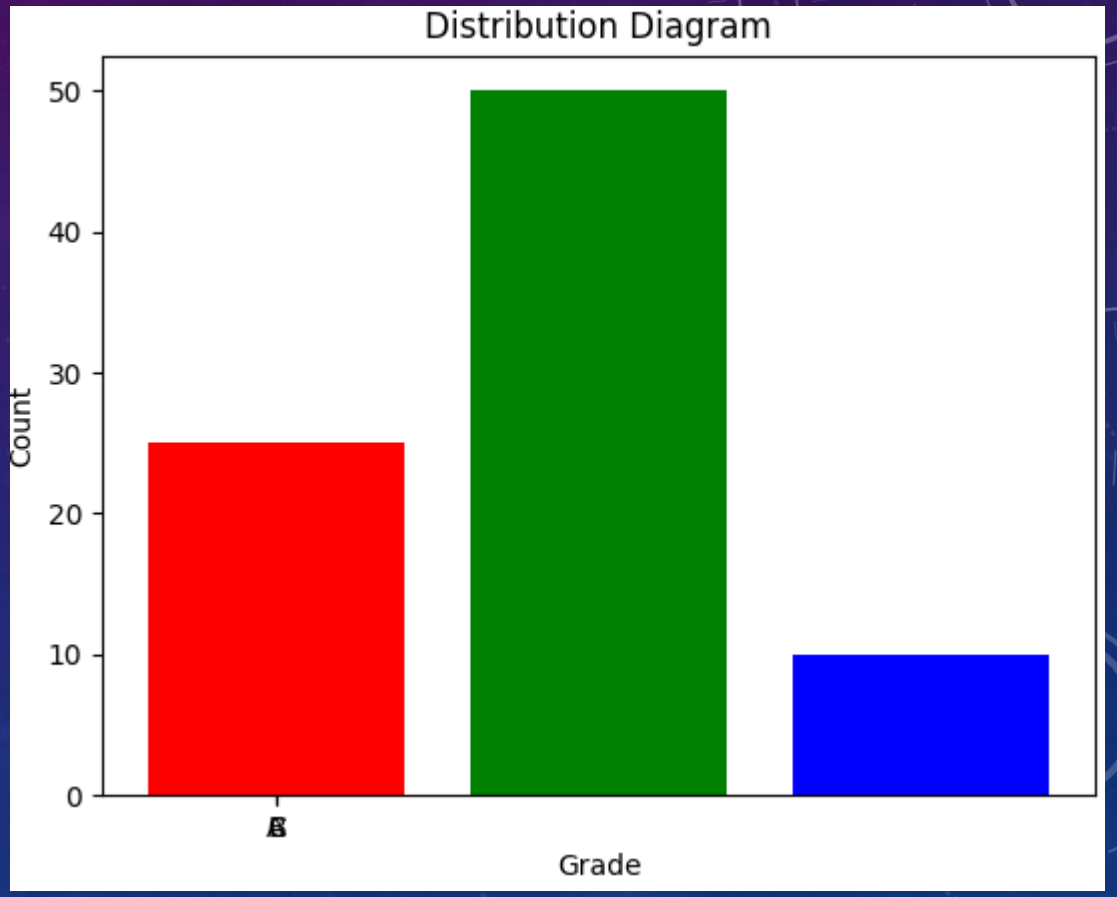
DRAWING FIGURE IN PYTHON

- (in ubuntu)

  sudo apt-get install python3-tk
- pip3 install numpy
- pip3 install tkinter
- pip3 install matplotlib

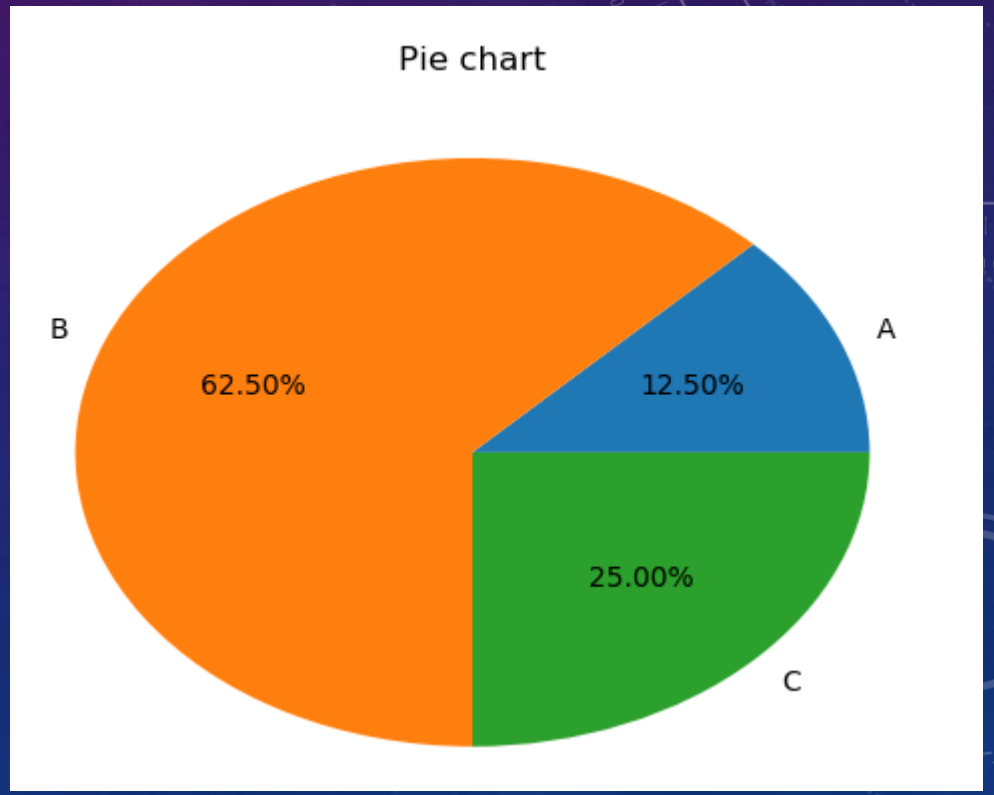
DRAWING FIGURE IN PYTHON

```
import matplotlib.pyplot as plt
name_list =['C','B','A']
index =[0 for i in range(len(name_list))]
cnt_list = []
cnt_list.append(25)
cnt_list.append(50)
cnt_list.append(10)
plt.bar(range(len(cnt_list)), cnt_list, color='rgby')
plt.xticks(index, name_list)
plt.show()
```



DRAWING FIGURE IN PYTHON

```
import matplotlib.pyplot as plt

labels = ['A', 'B', 'C']

X = [10, 50, 20]

fig = plt.figure()

plt.pie(X, labels=labels, autopct='%1.2f%%') # 画饼图（数据，数据对应的标签，百分数保留两位小数点）

plt.title("Pie chart")

plt.show()
```



QUZI 1

- 1. 统计如下指定学年、学期、实例号、课程号的课程（区分不同学年学期）的成绩分布情况并画图显示：
  - course_id='192’
  - sec_id=1 and semester='Fall' and year=2002
- 具体分类标准X
  - A+, A-, B+, B-, C+, C-, D+, D-, 其它
  - 上述统计X，若没有的默认是0值