Enบวิชา การเขียนโปรแกรมเชิงวัตถุ (7152307)
ภาคเรียนที่ 2 ปีการศึกษา 2566
ข้อสอบปลายภาค

1. จาก Class Diagram ต่อไปนี้ จงเขียน class ด้วยภาษา JavaScript ให้ถูกต้อง โดยให้มี method main() เพื่อแสดงผลต่อไปนี้

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University: Nakhon Pathom Rajabhat University,
        Location: 85 Malaiman Road, Nakhon Pathom, Thailand,
        Departments: Computer Science, Software Engineering,
        Students: Alice, Bob,
        Professors: Dr. Worachet Uttha, Dr. Udsanee Pakdeetrakulwong

Department: Computer Science,
        Courses: 1,
        Students: Alice,
        Professors: Dr. Worachet Uttha

Department: Software Engineering,
        Courses: 1,
        Students: Bob,
        Professors: Dr. Udsanee Pakdeetrakulwong

Course: CS101 - Introduction to Programming,
        Professor: Dr. Worachet Uttha,
        Students: Alice

Course: SE101 - Introduction of Database Design,
        Professor: Dr. Udsanee Pakdeetrakulwong,
        Students: Bob

Student: Alice, Student ID: S001, Year: 1,
        Courses: Introduction to Programming

Student: Bob, Student ID: S002, Year: 2,
        Courses: Introduction of Database Design

Professor: Dr. Worachet Uttha, Staff ID: P001,
        Courses: Introduction to Programming

Professor: Dr. Udsanee Pakdeetrakulwong, Staff ID: P002,
        Courses: Introduction of Database Design
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Students in the University:
Student: Alice, Student ID: S001, Year: 1,
        Courses: Introduction to Programming

Student: Bob, Student ID: S002, Year: 2,
        Courses: Introduction of Database Design

Professors in the University:
Professor: Dr. Worachet Uttha, Staff ID: P001,
        Courses: Introduction to Programming

Professor: Dr. Udsanee Pakdeetrakulwong, Staff ID: P002,
        Courses: Introduction of Database Design

Departments in the University:
Department: Computer Science,
        Courses: 1,
        Students: Alice,
        Professors: Dr. Worachet Uttha

Department: Software Engineering,
        Courses: 1,
        Students: Bob,
        Professors: Dr. Udsanee Pakdeetrakulwong
```

หมายเหตุ: ทุก class ให้สร้าง method toString() เพื่อแสดงรายละเอียดที่ควรแสดงของแต่ละ class

การส่งงาน:
1. Source code file "university.js"
2. Screenshot ผลลัพธ์จาก Terminal

University

+ String name
+ String location

+void addDepartment(Department)
+void addStudent(Student)
+void addProfessor(Professor)
+void removeDepartment(Department)
+void removeStudent(Student)
+void removeProfessor(Professor)
+Department[] getDepartments()
+Student[] getStudents()
+Professor[] getProfessors()
+String toString()

1
has
1..*

Department

+ String name

+void addCourse(Course)
+void removeCourse(Course)
+void addStudent(Student)
+void removeStudent(Student)
+void addProfessor(Professor)
+void removeProfessor(Professor)
+Course[] getCourses()
+Student[] getStudents()
+String toString()

1
contains
1..*

1

is a part of

1

Course

+ String code
+ String title

+void addStudent(Student)
+void removeStudent(Student)
+void setProfessor(Professor)
+Professor getProfessor()
+Student[] getStudents()
+String toString()

Person

+ String name
+ String address
+ String email

+String toString()

0..*

1
taught by
1

is a

enrolled

is a

is a part of
1

Professor

+ String staffId

+void teachCourse(Course)
+void stopTeachingCourse(Course)
+Course[] getCourses()
+String toString()

Student

+ String studentId
+ int year

+void registerCourse(Course)
+void dropCourse(Course)
+Course[] getCourses()
+String toString()