# 2347138_Q3

August 9, 2023

## 1 P3

```python
import qr

# Test case 1
print(qr.EncodeQR("Hi"))

# Test case 2
print(qr.EncodeQR("Std113"))
```

```
['1000000001001000010000001101001']
None
```

## 2 P4

```python
class Student:
    def __init__(self, name, student_id, age, gpa, credits_earned):
        self.name = name
        self.student_id = student_id
        self.age = age
        self.gpa = gpa
        self.credits_earned = credits_earned

    def display_info(self):
        print(f"Name: {self.name}")
        print(f"Student ID: {self.student_id}")
        print(f"Age: {self.age}")
        print(f"GPA: {self.gpa:.2f}")
        print(f"Credits Earned: {self.credits_earned}")

    def update_gpa(self, new_gpa):
        self.gpa = new_gpa

    def verify_honors(self):
        if self.gpa >= 3.5:
            print(f"{self.name} is eligible for honors.")
        else:
```

```python
            print(f"{self.name} is not eligible for honors.")


class UndergraduateStudent(Student):
    def __init__(self, name, student_id, age, gpa, credits_earned, year):
        super().__init__(name, student_id, age, gpa, credits_earned)
        self.year = year

    def display_info(self):
        super().display_info()
        print(f"Year: {self.year}")


class GraduateStudent(Student):
    def __init__(self, name, student_id, age, gpa, credits_earned, program):
        super().__init__(name, student_id, age, gpa, credits_earned)
        self.program = program

    def display_info(self):
        super().display_info()
        print(f"Program: {self.program}")


# Creating objects
undergrad_student = UndergraduateStudent("Alice", "U001", 20, 3.7, 120,
 ↪"Junior")
grad_student = GraduateStudent("Bob", "G001", 25, 3.9, 60, "Computer Science")

# Calling methods
print("Undergraduate Student:")
undergrad_student.display_info()
undergrad_student.verify_honors()

print("\nGraduate Student:")
grad_student.display_info()
grad_student.verify_honors()
```

```
Undergraduate Student:
Name: Alice
Student ID: U001
Age: 20
GPA: 3.70
Credits Earned: 120
Year: Junior
Alice is eligible for honors.

Graduate Student:
Name: Bob
```

```
Student ID: G001
Age: 25
GPA: 3.90
Credits Earned: 60
Program: Computer Science
Bob is eligible for honors.
```

[ ]: