

```

# Question 1 answer
class RestaurantCheck:
    def __init__(self, check_number, sales_tax_percent, subtotal, table_number,
                 server_name):
        self.check_number = check_number
        self.sales_tax_percent = sales_tax_percent
        self.subtotal = subtotal
        self.table_number = table_number
        self.server_name = server_name

    def calculate_total(self):
        tax_amount = self.subtotal * (self.sales_tax_percent / 100)
        total = self.subtotal + tax_amount
        return total

    def print_check(self):
        total = self.calculate_total()
        filename = f"check{self.check_number}.txt"
        with open(filename, 'w') as file:
            file.write(f"Check Number: {self.check_number}\n")
            file.write(f"Sales tax: {self.sales_tax_percent}%\n")
            file.write(f"Subtotal: ${self.subtotal:.2f}\n")
            file.write(f"Total: ${total:.2f}\n")
            file.write(f"Table Number: {self.table_number}\n")
            file.write(f"Server: {self.server_name}\n")
        print(f"Check saved to {filename}")

# Test the class
check = RestaurantCheck(443, 6.0, 23.14, 17, "Sonic the Hedgehog")
check.print_check()

```

Check saved to check443.txt

```

# Question 2 answer
import re

def validate_phone_number(phone_number):
    pattern = r'^\d{10}$'
    return bool(re.match(pattern, phone_number))

def validate_name(name):
    pattern = r'^[A-Z][a-zA-Z\s]+$'
    return bool(re.match(pattern, name))

def validate_email(email):
    pattern = r'^\w+([\.-]?\w+)*@\w+([\.-]?\w+)*(\.\w{2,3})+$'
    return bool(re.match(pattern, email))

def validate_date(date):
    pattern = r'^\d{2}-\d{2}-\d{4}$'
    return bool(re.match(pattern, date))

phone_number = '9078679850'
name = 'Ramya Vedhartham'
email = 'vedharthamramya@example.com'
date = '17-11-1990'

```

```
if validate_phone_number(phone_number):
    print(f'Phone number "{phone_number}" is valid.')
else:
    print(f'Phone number "{phone_number}" is invalid.')

if validate_name(name):
    print(f'Name "{name}" is valid.')
else:
    print(f'Name "{name}" is invalid.')

if validate_email(email):
    print(f'Email "{email}" is valid.')
else:
    print(f'Email "{email}" is invalid.')

if validate_date(date):
    print(f'Date "{date}" is valid.')
else:
    print(f'Date "{date}" is invalid.')

    Phone number "9078679850" is valid.
    Name "Ramy Vedhartham" is valid.
    Email "vedharthamramya@example.com" is valid.
    Date "17-11-1990" is valid.
```

Check Number: 443
Sales tax: 6.0%
Subtotal: \$23.14
Total: \$24.53
Table Number: 17
Server: Sonic the Hedgehog