

# Python Programming Mini Projects

## Task 1: To-Do List

```
tasks = []

while True:
    print("1. Add Task")
    print("2. View Tasks")
    print("3. Delete Task")
    print("4. Exit")

    choice = input("Enter choice: ")

    if choice == '1':
        task = input("Enter task: ")
        tasks.append(task)

    elif choice == '2':
        for i, task in enumerate(tasks, 1):
            print(i, task)

    elif choice == '3':
        num = int(input("Enter task number: "))
        tasks.pop(num-1)

    elif choice == '4':
        break
```

## Task 2: Calculator

```
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))

op = input("Enter operation (+ - * /): ")

if op == '+':
    print(num1 + num2)
elif op == '-':
    print(num1 - num2)
elif op == '*':
    print(num1 * num2)
elif op == '/':
    print(num1 / num2)
```

## Task 3: Password Generator

```
import random
import string

length = int(input("Enter length: "))

chars = string.ascii_letters + string.digits + string.punctuation
password = ""

for i in range(length):
    password += random.choice(chars)

print(password)
```

## Task 4: Rock Paper Scissors

```
import random

choices = ["rock", "paper", "scissors"]
```

```

user = input("Enter choice: ")
computer = random.choice(choices)

print("Computer:", computer)

if user == computer:
    print("Tie")
elif (user=="rock" and computer=="scissors") or (user=="paper" and computer=="rock") or (user=="scissors" and computer=="paper"):
    print("You Win")
else:
    print("You Lose")

```

## Task 5: Contact Book

```

contacts = {}

while True:
    print("1 Add")
    print("2 View")
    print("3 Search")
    print("4 Delete")
    print("5 Exit")

    ch = input("Enter choice: ")

    if ch == '1':
        name = input("Name: ")
        phone = input("Phone: ")
        contacts[name] = phone

    elif ch == '2':
        for n,p in contacts.items():
            print(n,p)

    elif ch == '3':
        name = input("Search name: ")
        print(contacts.get(name,"Not found"))

    elif ch == '4':
        name = input("Delete name: ")
        contacts.pop(name,None)

    elif ch == '5':
        break

```