## **Employee-Wage-Computation**

# UC1: Added Employee Attendance Check print("Welcome to Employee Wage Computation Program") import random print("Welcome to Employee Wage Computation Program") # UC1: Check Employee Attendance attendance = random.choice([0, 1])

print("Employee is Present")

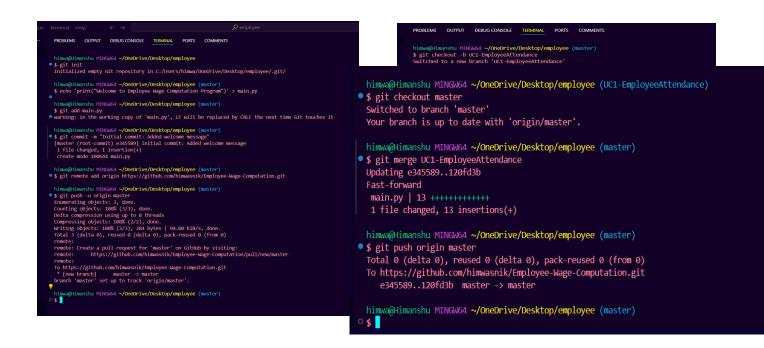
else:

print("Employee is Absent")

#### **Explanation:-**

if attendance == 1:

- Class **Variables**: Constants such as WAGE\_PER\_HOUR, FULL\_DAY\_HOURS, PART\_TIME\_HOURS, etc., are class variables used throughout the calculations.
- Attendance **Check (UC 1)**: The is\_employee\_present() method uses random.choice() to randomly assign whether an employee is present or absent.



# **UC2: Added Daily Employee Wage Calculation**

```
# UC2: Daily Employee Wage
wage_per_hour = 20
full_day_hour = 8
daily_wage = wage_per_hour * full_day_hour
print(f"Daily Employee Wage: {daily_wage}")
```

#### **Explanation:-**

Daily Wage Calculation (UC 2): calculate\_daily\_wage() takes the number of hours worked as input and calculates the daily wage based on WAGE\_PER\_HOUR

```
### PROBLEMS OUTPUT DEBUGCONSOLE | IEBMINAL | PORTS COMMENTS

1 file changed, 13 insertions(+)

himme@dimanshu MINEASA ~/Onchrive/Desktop/employee (master)

$ git push origin master

fotal 8 (delta 8), reuse 8 (delta 9), pack-reused 9 (from 8)

To https://github.com/himmosnik/Employee-Wage-Computation.git

245598.128fd3b master -> master

himme@dimanshu MINEASA ~/Onchrive/Desktop/employee (master)

$ git checkout -b UC2-DailyWageCalculation

satiched to a new branch 'UC2-DailyWageCalculation'

himme@dimanshu MINEASA ~/Onchrive/Desktop/employee (UC2-DailyWageCalculation)

$ yim main.py

himme@dimanshu MINEASA ~/Onchrive/Desktop/employee (UC2-DailyWageCalculation)

$ git add main.py

himme@dimanshu MINEASA ~/Onchrive/Desktop/employee (UC2-DailyWageCalculation)

$ git add main.py

himme@dimanshu MINEASA ~/Onchrive/Desktop/employee (UC2-DailyWageCalculation)

$ git be add main.py

himme@dimanshu MINEASA ~/Onchrive/Desktop/employee (UC2-DailyWageCalculation)

$ git push origin UC2-DailyWageCalculation

1 file changed, 6 insertions(+)

himme@dimanshu MINEASA ~/Onchrive/Desktop/employee (UC2-DailyWageCalculation)

$ git push origin UC2-DailyWageCalculation

remorating objects; 5, done.

Counting objects; 100% (5/5), done.

Delta compression using up to 8 threads

Compressing objects; 100% (5/5), done.

Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)

remote:

note:

note:
```

```
### PROBLEMS OUTPUT DEBLOCOMOUS TERMINAL PORTS COMMENTS

| PROBLEMS OUTPUT DEBLOCOMOUS TERMINAL PORTS COMMENTS
| Nime@filamendus MINEAGA -/Oredorive/Desktop/employee (UC2-DailyAugeCalculation)
| $ git commit == "Uc2: Added Daily Employee Sage Calculation" |
| UC2-DailyAugeCalculation on Debboscs | UC2: Added Daily Employee Wage Calculation |
| I file changed, 6 insertions(*) |
| hims@filamendus MINEAGA -/Oredorive/Desktop/employee (UC2-DailyAugeCalculation)
| $ git push origin UC2-DailyAugeCalculation |
| Enumerating Objects: 0, down. |
| Conservating Objects: 0, down. |
| Conservating Objects: 100% (2/2), down. |
| Conservating Objects: 100% (2/2), down. |
| Writing Obje
```

#### **UC3: Part-Time Employee Wage**

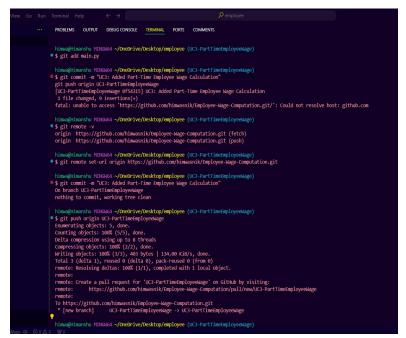
```
part_time_hour = 4

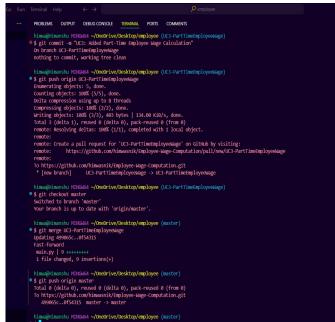
part_time_wage = wage_per_hour * part_time_hour

print(f"Part-time Employee Wage: {part_time_wage}")
```

#### **Explanation:-**

Part-Time Wage (UC 3): part\_time\_employee\_wage() method calculates the wage based on part-time hours.





#### **UC4: Solve using Switch Case**

```
def employee_wage(employee_type):
    switcher = {
        1: full_day_hour * wage_per_hour, # Full-time employee
        2: part_time_hour * wage_per_hour # Part-time employee
    }
    return switcher.get(employee_type, 0) # Default for absent
```

employee\_type = random.choice([0, 1, 2]) # 0: Absent, 1: Full-time, 2: Part-time
print(f"Employee Wage (Switch Case): {employee\_wage(employee\_type)}")

#### **Explanation:-**

Monthly Wage Calculation (UC 4): monthly\_wage() calculates the wage for 20 working days in a month.



#### **UC5: Calculate Wages for a Month**

```
working_days_per_month = 20
monthly_wage = working_days_per_month * daily_wage
print(f"Monthly Employee Wage: {monthly_wage}")
```

## **Explanation:-**

**Conditional Monthly Wage Calculation (UC 5)**: conditional\_monthly\_wage() keeps track of both total days and hours worked, stopping when either condition exceeds the monthly

limits.

# **UC6: Calculate Wages Till Condition**

```
max_hours_per_month = 100
total_working_days = 0
total_working_hours = 0

while total_working_days < 20 and total_working_hours < max_hours_per_month:
   hours_worked = random.choice([0, 4, 8]) # 0: Absent, 4: Part-time, 8: Full-time
   total_working_hours += hours_worked
   total_working_days += 1

total_wage = total_working_hours * wage_per_hour
print(f"Total Employee Wage for the Month: {total_wage}")</pre>
```

# **Explanation:-**

Main Method (UC 6): compute\_employee\_wage() is the main entry point, calling conditional\_monthly\_wage() and printing the total monthly wage based on the conditions.

#### UC7: Refactor code using class method

class EmployeeWageComputation:

```
wage_per_hour = 20
full_day_hour = 8
part_time_hour = 4

@classmethod
def calculate_wage(cls, employee_type):
   if employee_type == 1: # Full-time
     return cls.full_day_hour * cls.wage_per_hour
   elif employee_type == 2: # Part-time
     return cls.part_time_hour * cls.wage_per_hour
   else:
     return 0 # Absent
```

wage = EmployeeWageComputation.calculate\_wage(employee\_type)
print(f"Employee Wage (Class Method): {wage}")

