Write a program that will perform the following:

F1 - Display Employee List - Retrieve records from empList.txt

F2 - Add Employee

Ask user to input the following data:

* unique employee number
* lastname
* firstname
* department
* rate per hour

Write the employee record to the empList.txt

F3 - Add Payroll Record

Ask user to input the following data:

* employee number
* month
* no of days worked

write the payroll record into the empMR.txt

F4 - Generate pay slip

Ask for employee number and month of the payslip to be generated

Create a payslip like statement written in a text file.

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Payslip for the Month of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Employee No.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Employee Name: \_\_\_\_\_\_\_\_\_\_\_\_\_

Department: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Rate per Day:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ No. of Days Worked: \_\_\_\_\_\_\_\_

Gross Pay: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Validation

F2V - Add Employee Record

1. Employee Number (9-digits)
2. last and Firstname (characters only)
3. Department must one of the following: Accounting, Marketing, Human Resources, Finance, MIS, Admin
4. Rate per Day (real numbers)

F3V - Add Payroll Record

1. Employee Number (must be of an existing employee)
2. Month (1-12) only
3. No. of Day : whole numbers (depend on the number of days of the given Month)
4. There must be only one record for one employee for each month.

F4V - Generate Payslip

1. Employee No. (must of an existing employee)
2. Month (1-12 and must be existing in the record)

Rubric:

* Functionality 25
* Exception Handling 20
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* Coding Style (Module/Functions,Data Structures) 20
* Formatting/Output Design 15

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| --- | --- | --- | --- | --- | --- | --- |
| Code | Test Name | Input | Expected | Output | Passed? | Remarks |
| F1 | Show All Employees | A | 201911007…  201203008…  199710014…  201612010…  201710017…  201701013…  201011003…  201409015…  199512017…  199708003… |  | Yes |  |
| F2 | Add Employee | B  123456789  Lipat  Job  Admin  1234.1234  a | …. <10 items> …  123456789 Lipat, Job Admin, 1234.1234 |  | Yes |  |
| F2V – A | Add Employee: invalid id | B  Abcedfghi  12345678a | Input valid id  Input valid id |  | Yes |  |
| F2V - B | Add Employee:  Invalid name | B  987654321  123  Abc  123 | Input valid name  Input valid name |  | Yes |  |
| F2V - C | Add Employee:  Invalid Department | B  987654321  Li  Jo  Registrar | Input valid department |  | Yes |  |
| F2V - EXTRA | Add Employee:  Weird Department case | B  678912345  Li  Jo  mArKeTIng  10  a | …. <11 items> …  678912345 Li, Jo Marketing, 10 |  | Yes |  |
| F2V - D | Add Employee: invalid rate | B  987654321  Li  Jo  Admin  90a | Invalid rate |  | Yes |  |
| F2V - EXTRA | Add Employee: existing employee | B  678912345 | Employee Already Exists |  | Yes |  |
| F3 | Add Payroll Record | c  678912345  1  10 | … <at the bottom of text file … all items> …  678912345 , 1, 10 |  | Yes |  |
| F3V - A | Add Payroll Record: employee id not existing | C  999999999 | Please Input existing employee |  | Yes |  |
| F3V - D | Add Payroll Record: employee existing record | C  678912345  1 | Employee has existing record for month |  | Yes |  |
| F3V - EXTRA | Add Payroll Record: All months have records | B  987654321  Li  Jo  Human Resources  10  C  987654321  1  10  c  987654321  2  10  c  987654321  3  10  c  987654321  4  10  c  987654321  5  10  c  987654321  6  10  c  987654321  7  10  c  987654321  8  10  c  987654321  9  10  c  987654321  10  10  c  987654321  11  10  c  987654321  12  10  c  987654321 | Employee has records for all months |  | Yes |  |
| F3V - B | Add Payroll Record: invalid month | c  123456789  -1  13  1.123 | Invalid month  Invalid month enter less than 12  Month must be whole number |  | Yes |  |
| F3V - C | Add Payroll Record: invalid days | C  123456789  2  29  -1  3.1231 | Invalid days enter less than 29  Days must be more than 0  Invalid days  days must be whole number |  | Yes |  |
| F3V - C | Add Payroll Record: Days edge cases | C  678912345  7  0  32  31  D  678912345  7 | Invalid date  Invalid date  678912345  Marketing |  | Yes |  |
| F4 | Generate Payslip | D  678912345  1 | January  678912345  Li, Jo  Marketing  80  10  800 |  | Yes |  |
| F4 - EXTRA | Generate Payslip: Employee has No Records | D  123456789 | Employee Has No Record |  | Yes |  |
| F4 -B | Generate Payslip: Employee No Record for Month | D  678912345  3 | Employee Has No Record for Month |  | Yes |  |
| F4 - A | Generate Payslip: Employee Does not Exist | D  555555555 | Employee Does Not Exist |  | Yes |  |
| F4 - B | Generate Payslip:  Invalid Month | D  678912345  -1  13 | Invalid month  Invalid month |  | Yes |  |
|  | | | | | | |
| FV4 - EXTRA | Generate Payslip:  No Employees | D | No employees |  | Yes |  |
| FV1 - EXTRA | Display Employees:  No Employees | A | No employees |  | Yes |  |
| FV3 - EXTRA | Add Payroll Record: No Employees | C | No Employees |  | Yes |  |
| FV2 – EXTRA | Add Employee: No Employees | B  123456789  Li  Jo  Accounting  10  a | 12345789, Li Jo, Accounting, 10 |  | Yes |  |
| EXTRA | Exit Program | X | <program terminates > | <program terminates > | Yes |  |
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