Software Requirements Specification for debtRepaymentCalculator.py

| Requirement | Description |
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| General | |
| G-01 | Program shall be written using Python Version 3.9 or later |
| G-02 | On start-up, the program shall output a greeting and today’s date. |
| G-03 | On start-up, the program shall list options for the user to select. These options include:   1. View existing debts. 2. Add a new credit card debt entry. 3. Add payment to existing credit card. 4. Add balance to existing credit card. 5. Exit program. |
| G-04 | The program shall reject input if the options in requirement G-03 are not selected, and the user shall be prompted until an available option is selected. |
| G-05 | The program shall terminate after the actions for each option have been performed. A goodbye message shall be displayed on termination. |
| Functional Requirements (Viewing Existing Debts) | |
| FR-VD-01 | The program shall incorporate the use of a function called view\_extant\_debts() |
| FR-VD-02 | The function shall display all existing debts with the following information using the PrettyTable library.  Headers = {   1. Date last updated 2. Last 4 digits of card number 3. Remaining Balance 4. Average monthly repayments 5. Number of payments remaining 6. Debt cleared by (date)   } |
| Functional Requirements (Add new credit card debt entry) | |
| FR-ANCC-01 | The program shall incorporate the use of a function called add\_new\_cc(): |
| FR-ANCC-02 | The function shall take the following inputs:   1. Last 4 digits of card number 2. Remaining Balance 3. Date for debt to be cleared by |
| Functional Requirements (Add payment to existing credit card) | |
| FR-AP-01 | The program shall incorporate the use of a function called add\_payment() |
| FR-AP-02 | The function shall take the following inputs:   1. Last 4 digits of credit card number 2. Amount Paid |
| FR-AP-03 | The function shall output the following information using PrettyTable and save the information for future use by other functions in the program: See FR-VD-02   1. Date last updated 2. Last 4 digits of card number 3. Remaining Balance 4. Average monthly repayments 5. Number of payments remaining 6. Debt cleared by (date) |
| FR-AP-04 | The planned control flow for the function is as follows:   1. The user is asked to input the last 4 digits of their card number. 2. The function shall display existing information related to the card number. (See FR-VD-02) 3. The user is asked to input the amount paid to the credit card. 4. The following shall be updated:    1. Date last updated    2. Remaining Balance    3. Average monthly repayments 5. Updated information for this credit card shall be displayed. See (FR-VD-02) |
| Functional Requirements (Add balance to existing credit cards) | |
| FR-AB-01 | The program shall incorporate the use of a function called add\_balance() |
| FR-AB-02 | The function shall take the following inputs:   1. Last 4 digits of credit card number 2. Amount to add to balance. |
| FR-AB-03 | The function shall output the following information using PrettyTable and save the information for future use by other functions in the program: See FR-VD-02   1. Date last updated 2. Last 4 digits of card number 3. Remaining Balance 4. Average monthly repayments 5. Number of payments remaining 6. Debt cleared by (date) |
| FR-AB-04 | The planned control flow for the function is as follows:   1. The user is asked to input the last 4 digits of their card number. 2. The function shall display existing information related to the card number. (See FR-VD-02) 3. The user is asked to input the balance to add to the credit card. 4. The following shall be updated:    1. Date last updated    2. Remaining Balance    3. Average Monthly repayments 5. Updated information for this credit card shall be displayed. See (FR-VD-02) |
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