**List of IPO (Input, Process and Output) Charts**

**Module main()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| opt | 1. Prompt and Get opt | Call module housing\_loan()  Call module car\_loan()  Call module ROI()  Call module bank\_interest()  Call module EPF()  Call module help() |

**Module main\_menu()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| **N/A** | **N/A** | Display" \*\*\*SIMPLE FINANCIAL CALCULATOR\*\*\*" Display" 1 Housing Loan" Display" 2 Car Loan" Display" 3 Return of Investment (ROI) Calculator" Display" 4 Bank Interest Calculator" Display" 5 KWSP Retirement Calculator" Display" 9 Help & About" Display" 0 Exit" |

* **Remark for this module:**This module neither has any input nor process because it only serves for display purpose with no useful functionality.

**Module housing\_loan()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| cost loan\_prcnt,  tenure,  intrst\_rate year month | 1. Prompt and Get cost, loan\_prcnt,  tenure, intrst\_rate, year, month 2. Calculate installment, balance, intrst\_accrued, intrst\_sum, principal, year, month 3. Display no, month, year, installment, intrst\_accrued, intrst\_sum, principal, balance 4. END | no month year installment intrst\_accrued intrst\_sum principal balance |

**Module car\_loan()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| price  downpay  loan\_period  rate  year  month | 1. Prompt and Get price ,downpay , loan\_period , rate ,year , month  2. Calculate payment , balance, interest, intrst\_sum, principal, year, month 3. Display count, month, year, payment, interest, intrst\_sum, principal, balance 4. END | count  month  year  payment  interest  intrst\_sum  principal  balance |

**Module bank\_interest()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| initial\_amount  rate  years  type | 1. Prompt and Get initial\_amount, rate, years, type 2. Calculate final\_amount 3. Display final\_amount 4. END | final\_amount |

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| c\_age  r\_age  life\_expect  inflation  month\_payout  acc  month\_income  avg\_incre  contri\_rate  avg\_dvd | 1. Prompt and Get c\_age, r\_age. life\_expect, inflation, month\_payout, acc, month\_income. avg\_incre, contri\_rate, avg\_dvd 2. Calculate acc, retire\_yr\_on, spending\_yr\_period, month\_payout, total\_savings 3. Display acc, retire\_yr\_on, spending\_yr\_period, total\_saving 4. END | acc  retire\_yr\_on  spending\_yr\_period  total\_saving |

**Module EPF()**

**Module help()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| **N/A** | **N/A** | Display version, help |

* **Remark for this module:**This module neither has any input nor process because it only serves for display purpose with no useful functionality.

**Module ichecker(max, min, allowzero, psfix)**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| input | 1. Prompt and get input 2. Return value 3. END | value |

**Module fchecker(max, min, allowzero, psfix)**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| Input | 1. Prompt and get input 2. Return value 3. END | value |

**Module dchecker(max, min, allowzero, psfix)**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| Input | 1. Prompt and get input 2. Return value 3. END | value |

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| s | 1. Prompt and get s 2. Return hasextra 3. END | hasextra |

**Module flush()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| nmonth | 1. Prompt and get nmonth 2. Return \_cmonth 3. END | \_cmonth |

**Module month\_function()**