Data 03.12.17 Name Goteciuc Horatiu Gabriel

# Problem statement:

# Implement a method of performing elementar operations in any base and convert a number to other bases.

# Feature list

|  |
| --- |
| **Feature** |
| 1. Add 2 numbers in a selected base |
| 2. Substract 2 numbers in a selected base |
| 3. Multiply a number with a digit in a selected base |
| 4. Divide a number with a digit in a selected base |
| 5. Convert a number from a base to another |

## Running scenario 1

|  |  |  |  |
| --- | --- | --- | --- |
|  | **User** | **Program** | **Description** |
| a |  | Prints the menu |  |
| b | 1 |  | Selects the addition |
| c |  | Introduce the base: | Asks in which base will the operation be performed |
| d | 2 |  |  |
| e |  | Introduce the first operand: | Asks for the operands |
| f | 100011 |  |  |
| g |  | Introduce the second operand |  |
| h | 1111010101 |  |  |
| i |  | 1111111000 | Prints the result |
| j | 5 |  | Selects the conversion |
| k |  | Introduce the source base: | Asks for the source base, the number and the destination base |
| l | 2 |  |  |
| m |  | Introduce the number: |  |
| n | 1111111000 |  |  |
| o |  | Inroduce the destination base: |  |
| p | 16 |  |  |
| q |  | 3D5 | Prints the result |
| r | 0 |  |  |
| s |  | Exiting... | Exits the application |

## Tasks

|  |  |
| --- | --- |
| **Id** | **Description** |
| T1 | Implement a command based user interface |
| T2 | Implement a class that supports the following operations: |
| T3 | Addition in a given base |
| T4 | Multiplication with 1 digit in a given base |
| T5 | Substraction in a given base |
| T6 | Division with 1 digit in a given base |
| T7 | Conversion using the rapid conversion method |
| T8 | Conversion using substitution method |
| T9 | Conversion using succesive division method |
| T10 | Conversion using 10 as an intermediare base |