

COMPUTER SCIENCE 1A

PRACTICAL 4 DESIGN

Problem Description

program should present a menu to a user with the following options

A: Generate Triangular Number Sequence

B: Computer product of n triangular numbers.

C: Convert a string input by the user into the inverse of its previous case

X: The program must exit

Input & Output

Input	
<i>Input Description</i>	<i>Mechanism</i>
Choosing a menu option	<u>S</u> tandard input Stream
Numbers of terms for triangle sequence	<u>S</u> tandard input Stream
Number of terms for the product	<u>S</u> tandard input Stream
String for a swipe case	<u>S</u> tandard input Stream
Output	
Triangle sequence	Standard output
Product of the triangle sequence	Standard output
String output for swiped cases	Standard output

Data format

<i>dentifier</i>	<i>Data Type</i>	<i>Description</i>
blnContinue	Bool	Control do while loop
chrOption	Character	Control menu selection
IntNumber	integer	Specify the number of terms
intProd	integer	Stores the product of trangle sequence
strWord	string	Store the word for swipe cases

Pseudo Code

```
Let blnContinue =true
Prompt user to choose an option
Print Menu options
```

Read --> option

Switch case based on the option

If case a or A fails then

Let IntNumber = 0

Read --> intNumber

while cin fails

Clear input stream

Print error

Read -->intNumber

For loop

Print sequence

Break the case

If case b or B fails then

Let IntNumber = 0

Read --> intNumber

while cin fails

Clear input stream

Print error

Read -->intNumber

For loop

Print sequence

Break the case

If case c or C fails then

Let strWord = " "

Read --> string

For each charatctor in string

Swipe cases

Print string

Break the case

If case x or X fails then

Exit the loop

Break the case

If case default

Print error

UML Activity Diagram

