# Project description:

1. Implement Tiny Encryption Algorithm (TEA Encryption) using assembly?

2. Implement Tiny Decryption Algorithm (TEA Decryption) using assembly?

# Expected outcomes:

1. You should first encrypt any plain text using TEA Encryption and obtain the cipher text.

2. Then you should decrypt the cipher text (obtained in step 1) using TEA Decryption and obtain the plain text again.

# Rule:

1. This is a group based project.

2. Maximum number of students per group is 4.

3. Due date is on 19/12/2016

4. Oral exam (per group per member)

# Grading:

Maximum grade: 20 / 20

# Bonus:

1. Encrypt any string entered by the user then decrypt it. E.x: “Our exam will be next Tuesday”.

# Project description:

1. Implement a simple calculator that can (add, subtract, multiply, divide) many numbers and show their result. Each string must be terminated by equal sign (=).
2. The user string doesn’t contain any braces.

# Expected outcomes:

1. If the user input is:   
2+3\*5-4=  
The program’s result should be 13

# Rule:

1. This is a group based project.

2. Maximum number of students per group is 4.

3. Due date is on 19/12/2016

4. Oral exam (per group per member)

# Grading:

Maximum grade: 20 / 20

# Bonus:

1Add fact function that calculates factorial for number from 1 to 5.

1. Add fibo function that calculates Fibonacci for a number, as given an index in the Fibonacci array you must print the Fibonacci value in that index. Note that Fibonacci series is 1, 1, 2, 3, 5, 8, 13, …

# Project description:

1. Sort array of integers (up to 1000 elements) using any sorting technique (Complex sorting techniques will get higher grades).

# Expected outcomes:

1. If the user input is:   
1 1 2 8 4 5  
The program output should be  
1 1 2 4 5 8

# Rule:

1. This is a group based project.

2. Maximum and Minimum number of students per group is 4.

3. Due date is on 19/12/2016

4. Oral exam (per group per member)

# Grading:

Maximum grade: 15 / 20 for simple sorting techniques like bubble sort

# Project description:

1. Create a phone book that can add numbers to the phone, and add a name to this number. Any contact can have more than one number. The operations done in the phone book are (add a new contact, delete a contact, add a number to an existing contact, delete a number from an existing contact, query on a number, and show all contacts)

# Expected outcomes:

As stated in the problem description

# Rule:

1. This is a group based project.

2. Maximum number of students per group is 4.

3. Due date is on 19/12/2016

4. Oral exam (per group per member)

# Grading:

Maximum grade: 20 / 20

# Project description:

1. Control a stepper Motor with a micro controller using assembly language. The motor should rotate with a given degree. The motor can operate in two speeds(half speed, and full speed)

# Expected outcomes:

As stated in the problem description

# Rule:

1. This is a group based project.

2. Maximum number of students per group is 4.

3. Due date is on 19/12/2016

4. Oral exam (per group per member)

# Grading:

Maximum grade: 25 / 20

# Project description:

1. Snake game simulation

# Expected outcomes:

As stated in the problem description

# Rule:

1. This is a group based project.

2. Maximum number of students per group is 4.

3. Due date is on 19/12/2016

4. Oral exam (per group per member)

# Grading:

Maximum grade: 25 / 20

# Bonus:

1. The size of the snake increases each time it takes a new token.
2. The speed of the snake increases by time.
3. Output the score by the end of the game.