جامعة بيرزيت
BIRZEIT UNIVERSITY

Department of Computer Systems Engineering – Faculty of IT

ENCS238 – spring 2013

Assembly Project

Requirements and important notes:

- Work on this project individually
- Write two assembly programs for the two parts clearly (try to use comments)
- Try to use procedures as needed to improve readability of your code
- Write a short report, 2-4 pages only, about the two parts (i.e. short introduction, tools/methods used, snapshots of running program, testing your programs with most possible scenarios and cases)
- Copying from your friend, even when you change variable names and registers, means getting both ZERO and deducting 5% from your final mark!
- If you do your project (alone) correctly and efficiently and describe it clearly in a short report, you'll get 5% bonus on your final mark.
- Look at the *int 21* functions which deal with files and use the suitable for part 2. Make sure to explain these functions in your report.
- Everyone has to submit both hardcopy and softcopy (via Ritaj to your instructor's email) of the report and source code.
- Submission deadline is **Saturday 11/5/2013**

<u>Question 1</u> [25%]

Write an assembly program that asks user to enter a sequence of one-digit integer numbers terminated by entering ‘q’ . your program should display the number of evens and the number of odds, as in the following example:

```
Please enter a sequence of integers: 1 3 2 5 6 4 5 7 9 8 q
Number evens: 4
Number of odds: 6
```

<u>Question 2</u>: [75%]

Write an assembly program that works as follow:

1) when the program is executed, id displays the following menu:

```
(E)ncrypt a text file
(D)crypt a text file
(Q)uit
Please Enter your choice:
```

And asks the user to select one choice (E, D, or Q), other entries should be ignored.

2) If user selects the first choice, you program asks for the input file name and encrypts its content. The second selection is similar to first selection but does decryption. The third selection quits the program.

Use the following encryption criteria:

Read every single character from the input text file. **Circularly shift** the character **left two bits** and store it in an output file (encrypted). For decryption, read every single character of the encrypted file and **circularly shift it right two bits**, then store it in an output file (Decrypted).

end