Delivery Method

Upload your program to Canvas prior to the due date and time. The filename will be pa2.asm.

Point Value

This assignment is worth 10 points, 3 points per part, plus 1 point for style which includes, but is not limited to Comments, indentation, whitespace, and header comments.

Program Objectives

The objectives of this assignment are as follows. ABET-c, an ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired need.

Problem

Using the template provided (see attached), write an assembly program that accomplished the following:

Part 1:

1) Write a single statement that computes the product $\prod_{i=2}^{7} i$, *i* is an integer.

Specifications:

a) Place the results in EAX/AX/AL. You must choose the correct size, remember to consider efficient use of available resources.

b) To compute the product, you must use one or more constant expressions that computes the value. No loops or use of anything beyond Chapter 3 in the book may be used.

c) The register must be zeroed out before the result is stored.

Part 2:

1) Write a short block of computational statements that causes the EDX register to overflow.

2) Write a short block of computational statements that causes the ECX register to set the carry flag.

Specifications:

a) Use variables as opposed to immediate values.

b) Make sure no other computations affect the outcome of this register.

c) The register must be zeroed out before it is used.

Part 3:

Using directives for creating symbolics, write a single statement that computes the number of seconds in a day.

Specifications:

a) Place the result in the EDX register.

b) The statement that is placed in the program and expanded should be SECONDS_IN_DAY.

c) The EDX register should be zeroed out before it is used.

d) Make sure the statement uses the symbolics to the fullest extent; that is, SECONDS_IN_DAY will be the only expression on the instruction line. No other mnemonics, or operands just SECOONDS_IN__DAY.

Additional information:

A program template is provided below.

DO NOT COPY PASTE THE TEMPLATE! You must type it.

```
TITLE pa2.asm
; Header comment block as shown in lecture notes

INCLUDE Irvine32.inc

.data
;{ your variables are be defined here}

.data?

;{used as necessary}

.code
main PROC

;{executable code here}

call DumpRegs

exit
main ENDP       ; end of main procedure
END main        ; end of source code
```