NUM I 22-23: Assignment 2

Write a Fortran program to accomplish the following task:

1) Read one **initial** integer number (m) ***greater than one*** as user input.
2) Compute the value of π using the formula:

$$\pi = 4 \sum_{j=0}^{m} \frac{(-1)^j}{(2j+1)}$$

3) Increase the value of m and repeat the computation until the absolute difference between the above computed π and the value of π computed by using the formula:

$$\pi = 4\, atan(1.0)$$

is less than epsilon = 1.0E-2 **or** m > 100. Print the final values of m and π.

HINT: To get the absolute value of a real number, use intrinsic `abs`.
BONUS QUESTION: Can you get a precision < 1.0E-2 using this formula?

Send the source code to <ggiulian@ictp.it> by September 19th

Only the file that contains the source code is required possibly named as: Ass02.YourLastName.f90