



**Education and More, LLC**  
WE PROVIDE SOLUTIONS TO EDUCATIONAL PROBLEMS

## Lesson 7a: While

The While loop looks like this...

```
while (something is true):
```

```
    do something
```

```
    do something else
```

Example:

```
n=10
```

```
while (n>0):
```

```
    print(n)
```

```
    n=n-1
```

```
print("Blastoff!")
```

ERROR in video: When talking about the factorial function I mistakenly called it exponentiation the first time. I later correctly gave the right name. Sorry about that.

## Lesson 7b: Try/Except

Here is an example try/except block.

try:

```
num=int(input("Enter an integer"))
```

except:

```
print("You did not enter an integer.")
```

That is the standard try/except block. Later we will learn how to do different types of except errors. But basically you start with try: before you do something that has ANY possibility of failing. Then if it fails it will go to the except block. This will prevent any ugly errors from the computer.

## Homework for Lesson 7

Do the following using Python 3

- 1) Use the Try/Except block and while to ask for an integer and a float and make sure you got both. If not then ask again.
- 2) Use the while block to enter an age between 10 and 100 (inclusive).
- 3) Now repeat the above but do them inside functions.
- 4) Using only North, South, West and East. Ask user to enter coordinates for current location. Example: (-5, 3) (Think Math – Coordinate system). Then ask user for destination. Example: (4, -8). Then using function(s) and while loop(s) – go one position at a time (ie – no diagonal travel) until you get to destination. Make sure you print out something like “Move #2, I travelled north – now at position (-3,3).” When you reach destination print out “I got to the destination in only # moves”.
- 5) Ask for number of students. Ask for number of grades per student. Then ask for names of students, their grades then print out average, letter grade (ie 70-79 is a C), then overall class average.

Example: 2 students

3 grades

John

50 60 70

John – average: 60 – D

Kevin

40 70 100

Kevin – average 70 – C

Overall Class Average – 65 - D

- 6) Print the following using a while loop and number entered from user....

\*

\*\*

\*\*\* (if user entered 3)

- 7) Print the following using a while loop and number entered from user...

\*\*\*

\* \*

\*\*\*

(if user entered 3)

\*\*\*\*

\* \*

\* \*

\*\*\*\*

(if user entered 4)