

# CIS 260 Computer Programming I

## Programming Project: Pirate Trading Post

**Avast me hearties!** Ye have been pinched to computerize the Pirate's Trading Post

At the Pirate Trading Post we only accept gold doubloons... ***but we can make change!***

Ask the user for the cost of the item in "bits" (Spanish *reale*) and the number of doubloons received. Calculate and display the change in bits, Pieces of Eight (PE), pistole and doubloons.

*Computer folks know that 8 bits = 1 byte, but that obviously never caught on with pirates...*

Make change using the least number of coins possible.

Pirate Trading Post			
Pirate Coin	Equivalent in Reales	Equivalent in Piece of Eight	Equivalent in Doubloons
Bit (Reale)	1 Reale	1/8 P/E	1/128 Doubloon
Piece of Eight (Duro/peso)	8 Reale	1 P/E	1/16 Doubloon
Pistole	32 Reale	4 P/E	1/4 Doubloon
Gold Doubloon	128 Reale	16 P/E	1 Doubloon

Be sure to clearly prompt the user (even if they are a scalawag), use echo printing and clearly identify the results.

[Note: Extra "pirate talk" is ok, as long as the I/O is clear... savvy?]

Example:

```
AVAST! Ye have entered the Pirate Trading Post...
How many bits was yer item?
```

```
9
```

```
How many gold doubloons have ye got?
```

```
1
```

```
Yer change is:
```

```
7 bit
2 Pieces of Eight
3 Pistole
0 Doubloon
```

```
Now shove off before I make ye walk the plank!
```

### During the Design Phase:

Write a *pseudocode* algorithm of the steps to solve this problem, and construct a test set for the program following the guidelines discussed in class. (i.e. Sample Input, Expected Output, Rationale)

### During Coding:

Be sure to comment appropriately and use good variable names.

### Project Deliverables:

Final Program: (in <i>Presentation Format</i> )
Problem Description
Algorithm
Test Set Design
Source Code
Sample Output