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COMPSCI-1

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### Project 1

***Pseudocode:***

Ghouls Grave Guide to Greatness

Define the Project's Scope:

> Cashier Projects Main Criteria

- Must print several prompts to screen to create a User Interface.

- Must take user Input and store as a variables

- Must use arithmetic to calculate sales subtotal and total using variables.

Next Define is Needed for each criteria:

> Printing to screen

- User interface ASCII art

- Prompts to gather user input

- Prompts for display user input as formatted output

> Must take user input and store as variables

- Create variables to store user input

- Assign user input to variables

> Must use arithmetic to calculate subtotal and total using variables.

- Define arithmetic formula needed to achieve desired results

- Fill in arithmetic with variables

Pseudo Code example

This example uses functions to represent components of the project that need

to be completed. I have a working example for each component listed in the pseudo code below.

Pseudocode:

Define includes needed:

Define variables needed

> change, name, totals, tax, items, quantities, prices etc. variables

- take care to use proper variable type.

- can create a character array to store sentences with the following format

char variable Name [50];

- This creates an array of characters or string of the length 50

Program Structure

> We use the following functions to represent each of the three project criteria.

- printout()

\* Print out to screen

- input()

\* Gathers user input

- math()

\* Do arithmetic

Intro()

> Panther express printout()

> Panther express welcome printout()

> Name gathering printout()

> Name input()

> Hello name printout()

Item Information Gathering()

> What is the item name printout()

> Item name input()

> Item name confirmation printout()

> What is the item price printout()

> Item Price input()

> Item price confirmation

> What is the item quantity printout()

> Item quantity input()

> Item quantity confirm printout()

> What is the tax rate printout()

> Tax rate input()

> Tax rate confirmation()

Math()

> Subtotal math() > Total math()

> change()

Change() Structure

> while total >= 0

- if total >= 100

total - 100

hundreds + 1

- else if total >= 20

total - 20

twenties + 1

- Repeat this logic down to pennies.

End Display

> Formatted printout()

***Project Discussion***

1. This simple project presented many unforeseen challenges. Proper incorporation of best practices and coding structure where my primary focus when doing this project. This will be an ongoing work I plan on bringing to full functionality within the next several days. The biggest hurdle for me was time constraints. The debugging process slowed me down significantly.
2. I learned how to do basic formatting and UI’s using setw and setfill. I also solidified my prior knowledge of the use of printf string formatting. I utilized its functionality in this project by storing my prompts as formatted string variables. I then called these strings with printf and variables for the formatted areas to dynamically use the prompt variables for all possible scenarios.
3. The project was just about right. The only part i believe was to difficult for students unfamiliar with coding was the use of if else statements to deduce the change.I believe the complexity of this project was suitable however. This is comparable to what I would expect from a university level class.
4. I used several google searches as references. The searches I performed where minimally as follows:
   1. Printf string formatting c++
   2. C++ setw string formatting
   3. C++ iomanip library