# **CS 410 Binary to Assembly Activity Template**

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**CS410**

**Step 1:** List the binary file name.

**Step 2:** Identify the functions in the binary file.

**Step 3**: Convert the binary file to assembly code.

**Step 4:** Align the blocks of assembly code with their corresponding function in the binary file.

**Step 5:** Explain the functionality of the blocks of assembly code.

## File One: assignment3\_1.o

| **Functions** | **Blocks of Assembly Code** | **Explanation of Functionality** |
| --- | --- | --- |
| main | 40057d <main> Calls puts three times, then exit | Prints three separate strings using puts, then exits the program. Demonstrates basic string output and program termination. |
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## File Two: assignment3\_2.o

| **Functions** | **Blocks of Assembly Code** | **Explanation of Functionality** |
| --- | --- | --- |
| main | 40062d <main> Uses puts, then scanf, then printf | Prompts user for input, reads a value using scanf, and prints it back using printf. Demonstrates interactive I/O. |
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## File Three: assignment3\_3.o

| **Functions** | **Blocks of Assembly Code** | **Explanation of Functionality** |
| --- | --- | --- |
| AddNumbers | 40062d <AddNumbers>  Adds two numbers and returns result | Performs integer addition of two inputs and returns the sum. |
| main | 400641 <main> Handles input, calls AddNumbers, prints result | Reads two integers, sends them to AddNumbers, and prints the result using printf. Demonstrates parameter passing and function return. |
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## File Four: assignment3\_4.o

| **Functions** | **Blocks of Assembly Code** | **Explanation of Functionality** |
| --- | --- | --- |
| DisplayMenu | 4006df <DisplayMenu> Calls puts multiple times | Displays menu options for user selection. |
| PrintFact | 40062d <PrintFact> Looping multiplication, uses printf | Calculates factorial using a loop. Prints each step and the final result. |
| PrintSum | 400688 <PrintSum> Looping addition, uses printf | Adds numbers from N to 1 using a loop. Prints each step and the final result. |
| main | 400717 <main>  Displays menu, handles user choice | Loops through user input, calls PrintFact, PrintSum, or exits based on selection. |