

```

def pass1_macroprocessor(source_code):

    mnt = {} # Macro Name Table

    mdt = [] # Macro Definition Table

    intermediate_code = []

    macro_def = False

    macro_name = None

    for line in source_code:

        tokens = line.strip().split()

        if tokens[0] == "MACRO":

            macro_def = True

            elif macro_def and not macro_name:

                macro_name = tokens[0]

                mnt[macro_name] = len(mdt)

            elif macro_def and tokens[0] == "MEND":

                macro_def = False

                macro_name = None

            elif macro_def:

                mdt.append(line.strip())

            else:

                intermediate_code.append(line.strip())

    return mnt, mdt, intermediate_code

```

# Example usage

```

source_code = [

    "MACRO", "INCR &ARG", "ADD &ARG, 1", "MEND",

```

```

    "START", "MOV A, B", "INCR A", "END"
]

mnt, mdt, intermediate_code = pass1_macroprocessor(source_code)

print("MNT:", mnt)

print("MDT:", mdt)

print("Intermediate Code:", intermediate_code)


def pass2_macroprocessor(mnt, mdt, intermediate_code):
    expanded_code = []
    for line in intermediate_code:
        tokens = line.split()
        if tokens[0] in mnt:
            macro_start = mnt[tokens[0]]
            for macro_line in mdt[macro_start:]:
                expanded_code.append(macro_line.replace("&ARG", tokens[1]))
        else:
            expanded_code.append(line)
    return expanded_code


# Example usage for Pass-II

expanded_code = pass2_macroprocessor(mnt, mdt, intermediate_code)

print("Expanded Code:", expanded_code)

```

OUTPUT:

MNT: {'INCR': 0}

MDT: ['ADD &ARG, 1']

Intermediate Code: ['START', 'MOV A, B', 'INCR A', 'END']

Expanded Code: ['START', 'MOV A, B', 'ADD A, 1', 'END']