Sheet 3 (ADT Stack)

A. Implement both array-based and Linked-based ADT Stack.
B. Using ADT Stack, make an application for testing for pairs of matching delimiters. In our first application, we consider arithmetic expressions that may contain various pairs of grouping symbols, such as
    - Parentheses: "(" and ")"
    - Braces: "{" and "}"
    - Brackets: "[" and "]"

    Each opening symbol must match its corresponding closing symbol.
    For example, a left bracket, "[," must match a corresponding right bracket, "]," as in the following

    Expression $[(5+x)-(y+z)]$.

    The following examples further illustrate this concept:
    - Correct: ( )((`)){([( )])}
    - Correct: ((( )(( )){([( )])}))
    - Incorrect:)(( )){([( )])}
    - Incorrect: ({[ ])}
    - Incorrect: (
C. Using ADT stack,
    - implement a function for evaluating postfix expressions.
    - implement a function for converting decimal to binary.
    - Implement a function to rearrange stack to make even at bottom and odd at top.