FUNCTION matrix_builder()

```
/**
* The function builds a score matrix according to the 6 parameters.
* @param[in] seq1, a char array of RNA sequence
* @param[in] seq2,  a char array of RNA sequence
* @param[in] match_score an integer that represents match score
* @param[in] mismatch_score an integer represents mismatch score
* @param[in] gap_penalty an integer that represents gap penalty
* @param[in&out] scores a matrix presented by 2D array
*/

void matrix_builder(char seq1[], char seq2[], int match_score, int mismatch_score, int
gap_penalty, int scores[50][50])
```

PRECONDITIONS

- The length of seq1[] and seq2[] must be shorter than or equal to 10.
- seq1[] and seq2[] not null.
- seq1[] and seq2[] must and only contain letters G, U, A, C.

POSTCONDITIONS

- The matrix of comparing score corresponding to each position in the array must be displayed.
- The number of rows of the matrix must equal the length of seq1 and the number of column must equal to the length of seq2.

TESTING STRATEGY

Black-box testing method will be applied. Detailed test cases are as following:

- Call matrix_builder(), then compare the number of rows of the matrix with the length of seq1 as well as the number of column with the length of seq2.
  Expected output of the test: The result is 0, the expected result is 0.
- Call matrix_builder(), then compare value in each cell of scores with the matrix calculated by hand based on Needleman-Wunsch Algorithm.
  Expected output of the test: The result is 0, the expected result is 0.