<table>
<tr><td>Q1</td><td>Take an integer n as an input and find the sum of the series up to nth term using recursion and show the simulation of the recursion for $n = 5$
$$1 * 3 + 2 * 5 + 4 * 7 + 8 * 9 + \ldots + nth\ term$$</td><td>[5]</td></tr>
<tr><td>Q2</td><td>Function find_substr( ) takes two string arrays (a, b) as parameters, uses function str_length() to determine the lengths of the strings, and then looks for the smaller string anywhere in the bigger string. It returns 1 if the substring is found, or returns –1 if no match is found.

Write the two functions. Take two strings as input in the main method and use find_substr() to check if the second string is a substring of the first one.

[Restriction: str_length() cannot uses built-in strlen() function]

<table>
<tr><th>Sample input</th><th>Sample output</th></tr>
<tr><td>madam adam</td><td>adam is a substring of madam</td></tr>
<tr><td>telescope less</td><td>less is not a substring of telescope</td></tr>
<tr><td>101010 101</td><td>101 is a substring of 101010</td></tr>
</table>
</td><td>[5]</td></tr>
</table>

Submission guidelines:

1. Do not copy
2. You must submit two .c files (**q1.c and q2.c**) and one .pdf file (recursion simulation)
3. **Comment on each important line of code**. No marks will be given for uncommented codes.
4. **No marks will be given if your code does not compile properly.**