PROBLEM 1
You have a necklace of n beads (n <100) some of which are red, others blue and
others white, arranged at random. Let's see two examples for n = 29:

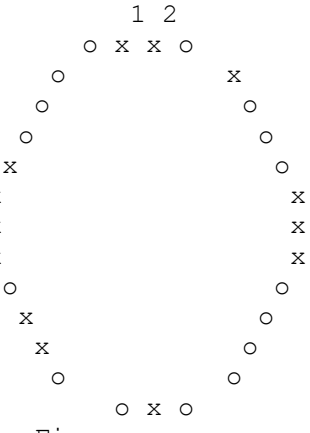

Figure a
o red bead
x blue bead
@ white bead

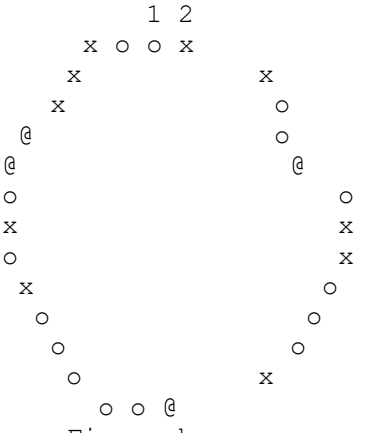

Figure b

(The beads considered first and second in the text that follows have been marked
in the picture).

The configuration in Fig. a) may be represented as a string of b's and r's, where b
represents a blue bead and r a red one, as
follows:brbrrrbbbrrrrrbrrbbrbbbbrrrrb

Suppose you are to break the necklace, lay it out straight, and then collect beads
of the same colour from one end until you reach a bead of a different colour, and
do the same for the other end (which may not be of the same colour as the beads
collected before this).
Determine the point where the necklace should be broken so that the most number of beads can be collected.

For example, for the necklace in Fig. a), 8 beads can be collected, with the breaking point either between bead 9 and bead 10, or between bead 24 and bead 25.

In some necklaces, white beads had been included as shown in Figure b) above. When collecting beads, a white bead that is encountered may be treated as either
red or blue, and painted with the desired colour. The string that represents this
configuration will include the symbols: r, b and w.

Write a program to do the following:
1. Read a configuration from an ASCII input file, NECKLACE.DAT,
with each configuration on one line. Write this data into an ASCII output

file, NECKLACE.SOL. An example of an input file would be:
Example:
NECKLACE.DAT
brbrrrbbbrrrrrbrrbbrbbbbrrrrb
bbwbrrrwbrbrrrrrb

2. For each configuration, determine the maximum number, M, of beads collectable, along with a breaking point.

3. Write to the outfile, NECKLACE.SOL, the number M and the breaking point. The solutions for different configurations should be separated with a blank record.
Example of a possible solution:
NECKLACE.SOL
brbrrrbbbrrrrrbrrbbrbbbbrrrrb
8 between 9 and 10

bbwbrrrwbrbrrrrrb
10 between 16 and 17