**“Letters on the Track”**

“Letters on the Track” is an application that allows a user to make letters of an

English alphabet run on the track with a given speed. It is also possible to change

the speed of a running letter and remove a letter from the track.

Implement the “Letters on the Track” application (“the app”) considering a

suggested UI, given user stories and requirements (see below).

**Suggested UI**

Suggested UI of the app (at the run time):



**User Stories**

1. *As a user* I launch the app *so that* I can start using it.

2. *As a user* I enter a letter that is not on the track to the Letter text box, set

its speed to N using the Speed slider and click the “GO!” button *so that* the

letter starts running on the track with the given speed.

3. *As a user* I enter a letter to the Letter text box that is already on the track

with speed N, set its speed to M and click the “GO!” button *so that* the

letter changes its speed from N to M and keeps running on the track.

4. *As a user* I enter a letter to the Letter text box that is already on the track

and click the “STOP” button *so that* the letter gets removed from the track.

**Requirements**

1. A newly added to the track letter starts running (moving) from the left

boundary of the track to the right boundary.

2. Reaching a boundary of the track (either left or right) a letter changes its

direction to the opposite direction and continues moving with the same

speed.

3. If a letter on the track meets another letter, then both letters change the

direction to the opposite direction and keep moving with the same speed.

4. Speed of a letter on the track ranges from 0 to 10.

5. It should only be possible to put only small and capital letters of the English

alphabet on the track.

6. The app should be robust, there should be a nice message when the user

makes a mistake. For example, if the user clicks “GO!” without a letter in

the letter box.

7. The app should be written in C# and the UI should be build using WPF.