**4.n** User Interface Design

4.n.1 Tutorial Loop Page

The loop page in the Tutorial section helps users understand the usage of for loop and while loop and the difference between them. Since sorting algorithms rely heavily on loop statements, it is necessary to introduce them to our users.

Every time the user opens this page, a prompt box will be displayed to introduce this page’s usage briefly.

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Figure n. prompt box

The main body of the loop page is shown in Figure n, which consists of two simple examples. Each example is a component named AnimationCode[Figure n]. This component combines the bar visualisation of loop and pseudocode. By controlling the animation part, the corresponding pseudocode will be highlighted.

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Figure n. two examples of for loop and while loop

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Figure n. AnimationCode component

Nearby the title, “For Loop” and “While Loop”, there are two question marks[Figure n]. By clicking the icon, a pop-up window will be presented. This window contains more detailed information about loop statements and help user learn more about loop statements.

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Figure n. help window