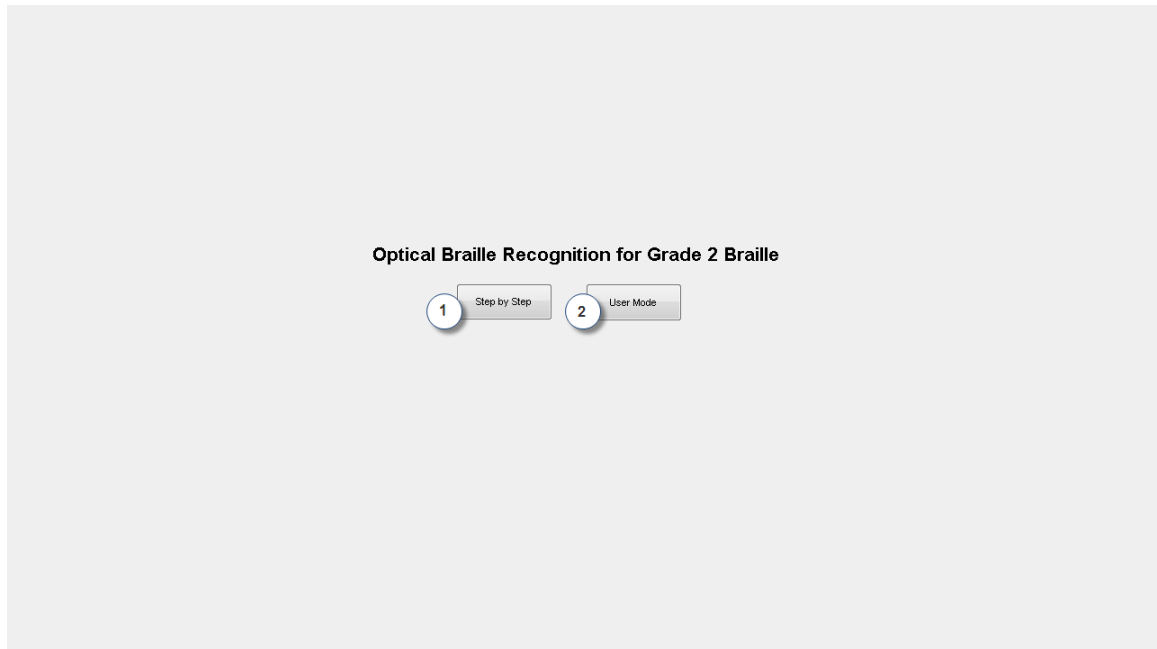


## APPENDIX A

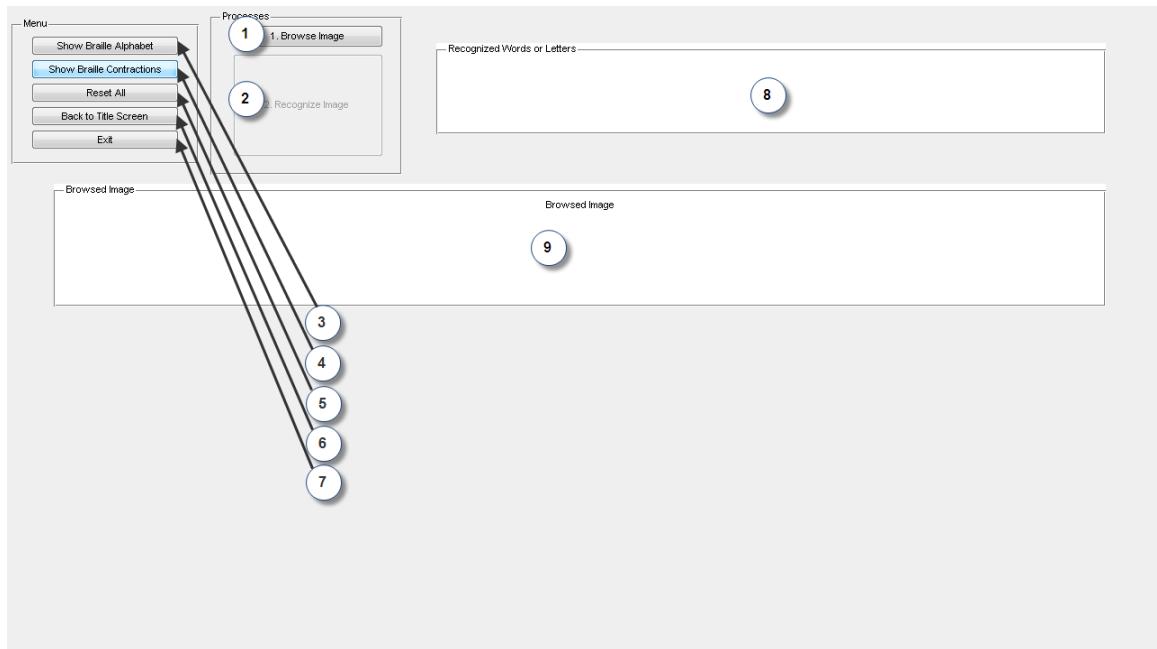
### User Interface



A.1

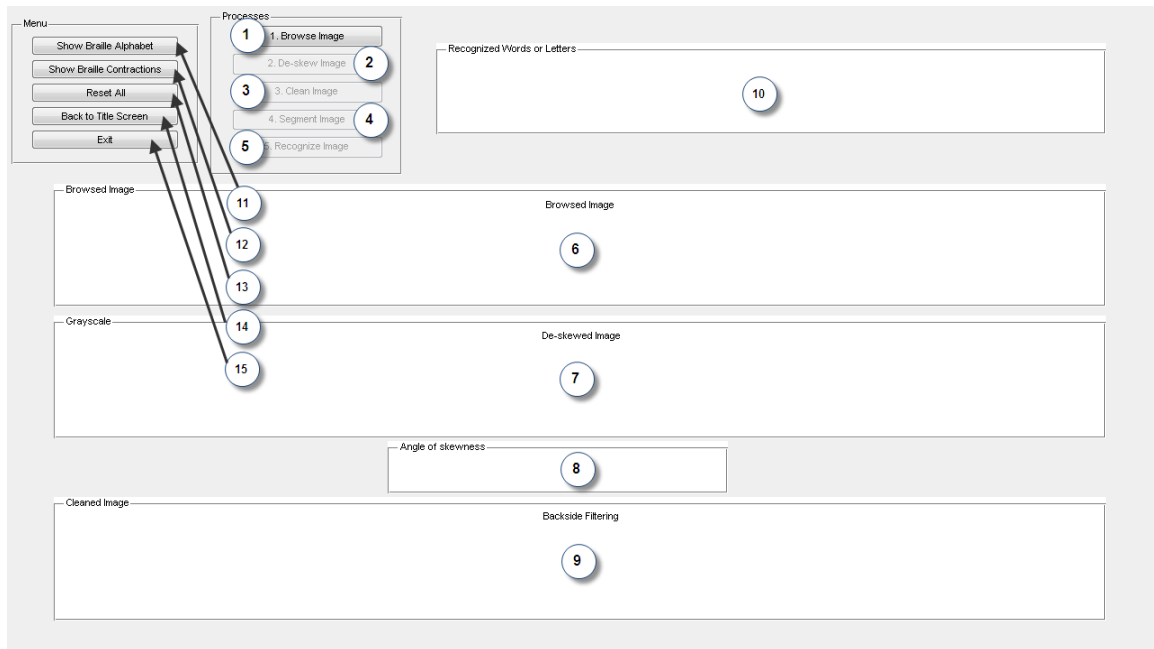
#### Title Screen Interface

1. Step by Step Button- enters step by step mode to enable an advanced user to view the Braille recognition processes one by one.
2. User mode – enters user mode which only displays strictly the input and the output of Braille recognition.



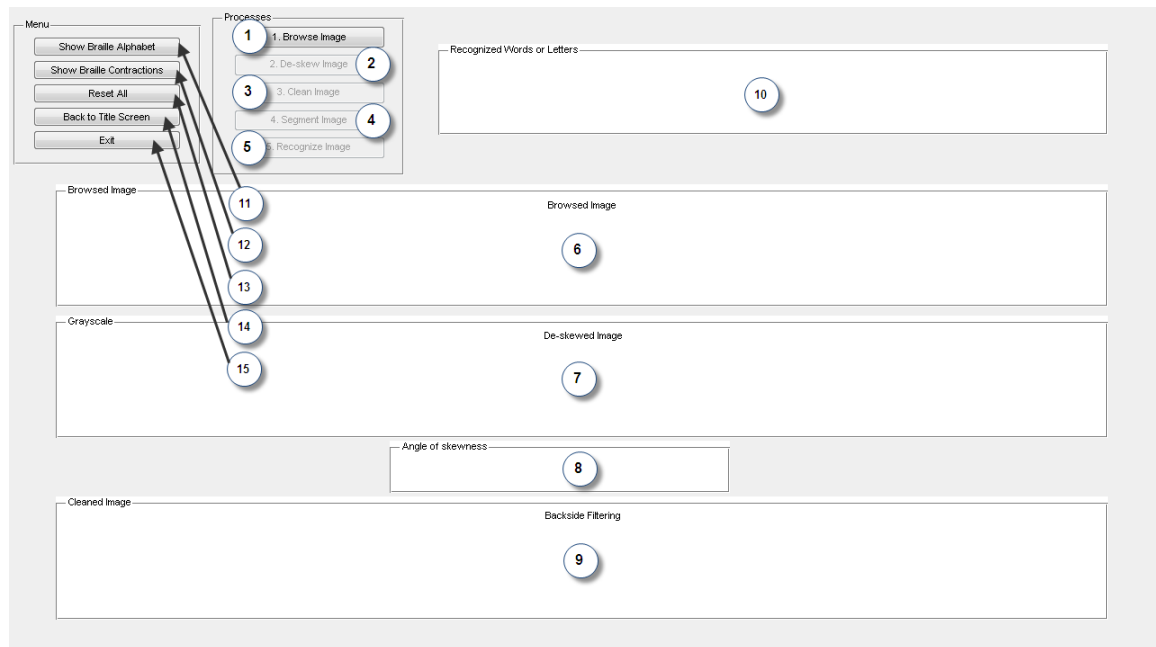
## A.2 User Interface (User Mode)

1. Browse Image Button – allows the user to choose which Braille image to translate.
2. Recognize Image Button – used to translate the Braille image in English text.
3. Show Braille Alphabet Button – shows the Braille alphabet for comparison purposes.
4. Show Braille Contractions Button – shows the Braille contractions for comparison purposes.
5. Reset All Button – to clear all the data in the user interface.
6. Back to Title Screen Button – returns to the initial screen
7. Exit Button – to close the application or system.
8. English Text Panel – displays the translated English text
9. Browsed Image Panel – displays the selected Braille image input



### A.3 User Interface (Step by Step)

1. Browse Image Button – allows the user to choose which Braille image to translate.
2. De-skew Image Button – straightens the skewed input image
3. Clean Image Button – performs the deletion of back side Braille dots
4. Segment Image Button – divides the Braille character/s
5. Recognize Image Button - identifies the Braille character/s from the image and convert it to its respective value
6. Browsed Image Panel – shows the chosen image to be manipulated
7. De-skewed Image Panel – displays the result after manipulating the skewed image input.
8. Angle of Skewness Panel– displays the tilted angle of the input
9. Back side Filtering Panel – displays the result of the deleted back side Braille dots
10. Recognized Image Panel – where the converted value will be displayed



### A.3 User Interface (Step by Step)

11. Show Braille Alphabet Button – shows the Braille alphabet for comparison purposes.
12. Show Braille Contractions Button – shows the Braille contractions for comparison purposes.
13. Reset All Button – to clear all the data in the user interface.
14. Back to Title Screen Button – returns to the initial screen
15. Exit Button – to close the application or system.