Handwriting Assessment for Movement Disorder Patients

HANDETECT Project

Pau Chen You | Soh Sheng Jun
Chung Ling High School, Penang

Dear Participant,

Thank you for participating in our Handwriting Assessment for Movement Disorder Patients. Your valuable contribution to this research will help us out advance our AI-powered handwriting analysis system for the early detection and monitoring of movement disorders.

You will be asked to complete the following tasks in a relaxed manner. Each task has a designated section in this assessment:

- Archimedes Spiral
- Simple House
- Running Stickman
- Simple Wave Curves
- L-Loops
- Straight Lines
- Simple Car

For each task, detailed instructions will be given with a sample as a reference. Please review the sample carefully before attempting each task.

Please take your time and complete the assessment at your own pace. We understand that you may need to take breaks or rest during the assessment, and that is completely fine. Your comfort and well-being are our top priorities.

All information provided and the results of the assessment will be kept strictly confidential. Your data will only be used for research purposes within the scope of this project.

Thank you once again for your participation. Your involvement is very helpful to our project. We appreciate your cooperation and wish you a comfortable and enjoyable assessment experience.

Best regards,

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Chung Ling High School

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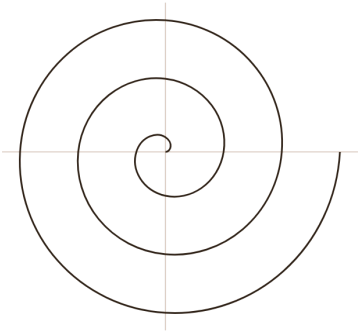
Task 1: Archimedes Spiral

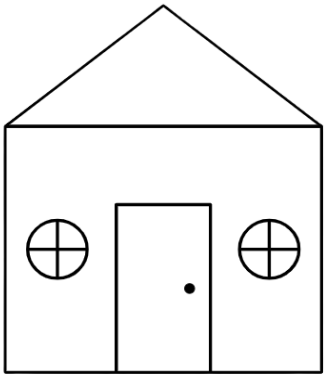
In this task, you will draw an Archimedes spiral in one continuous motion using a black ink pen. The objective is to complete three rounds of the spiral, following the sample shown below. Start from the centre point of the space given, aiming for a smooth and fluid motion. Once you have completed the three rounds, lift the pen from the paper at a suitable endpoint.



Sample

Task 2: Simple House

In this task, you will draw a simple house, with one door, two windows, a foundation and a roof. Start with a basic foundation and then add triangular shapes above it for the roof. Continue by drawing the walls, the windows and the door. Feel free to add as many or as few details as you feel comfortable with.



Sample

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Task 3: Running Stickman

In this task, you will draw a stickman in a running state as shown in the sample below. The running stickman should be drawn in a dynamic posture, with one leg lifted forward, and the other leg trailing behind. The arms should be positioned with one arm bent at the elbow and the other arm stretched backwards. Keep the stickman's body simple.

Sample

Task 4: Simple Wave Curves

In this task, you will draw smooth and continuous wave curves according to the sample below. You can draw as many waves as you can within the space given, as long as it is drawn in one continuous drawing. Continue drawing more curves, connecting them to form a flowing wave pattern.

Sample

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Task 5: L-loops

In this task, you will draw script l-loops according to the sample below. The l-loop is a continuous stroke that resembles the shape of the letter "ℓ" in a flowing manner. There is no limit to the number of l-loops you can draw within the space given. Make sure all of them are drawn in one continuous drawing.

Sample

Task 6: Straight Lines

In this task, you need to draw one vertical line and one horizontal line in a relaxing manner. There will be a designated starting point and an ending point for each line. Connect the points with a vertical or horizontal line.

Horizontal Line

Vertical Line

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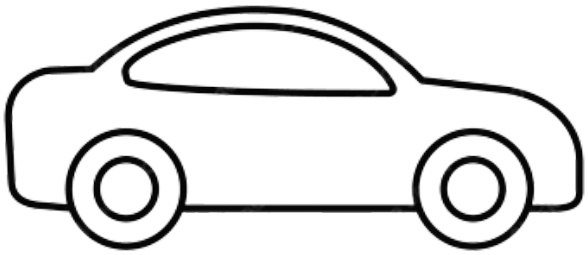
Task 7: Simple Car

In this task, you will need to draw a simple car following the provided sample. Begin by sketching the main body of the car. Next, add four wheels to the car. Connect the main body with a small roof on top of the car. Feel free to personalise your car by adding more details if you like. Enjoy the drawing and have fun!



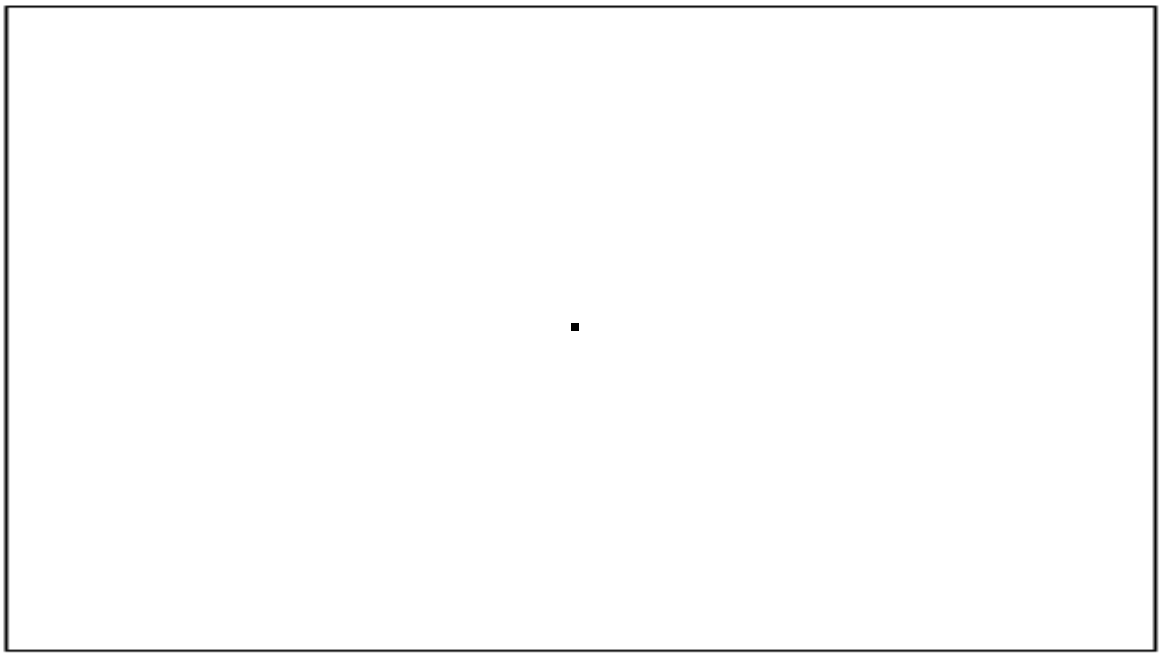
Sample

Results Sheet

Participant Information

Age	
Gender	Male / Female
Disease Name *(i.e. Parkinson's Disease, Essential Tremor, etc)*	
Duration of Symptoms *(i.e. Two years, Five months, etc)*	
Stage of Disease *(i.e. 1, 2, 3, 4, 5; or any other specific disease severity)*	
Handedness	Left-handed / Right-handed
Family History of Disease	

Task 1:



Results Sheet

Task 2:

Task 3:

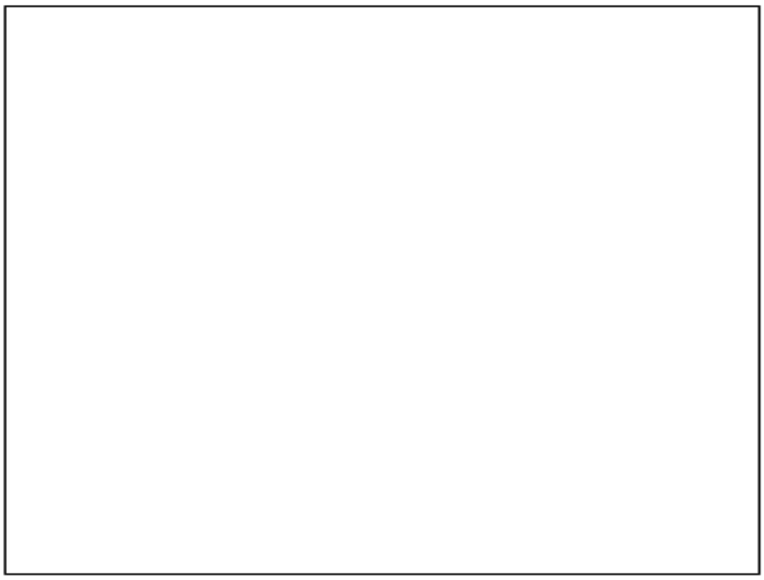
Results Sheet

Task 4:

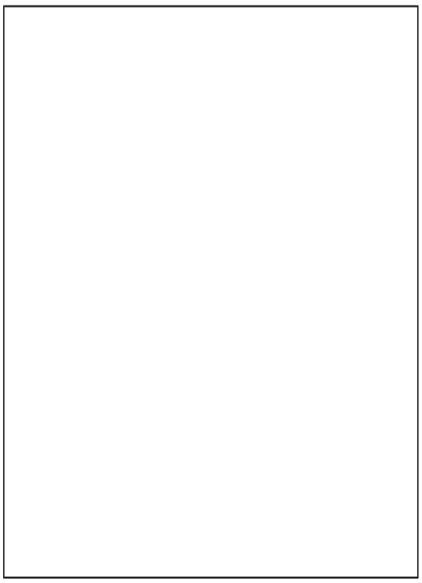
Task 5:

Results Sheet

Task 6:



Horizontal Line



Vertical Line

Task 7: