Who/Do/Be/Feel

> **Objective:** This page documents the motivational modelling process. Specifically, it includes the outcome of our group brainstorming process (which are four lists: who/do/be/feel), as well as a motivational model diagram. This will allow us to better understand not only the functional goals, but also the stakeholders and emotional goals of the system.

📊 Who/Do/Be/Feel Lists

- "Who" list concerns the stakeholders of the system; specifically who will be using our app.
- "Do" list concerns the functionality of the system; what should the system be able to do.
- "Be" list concerns the traits/qualities the system should have.
- "Feel" relates to the emotional goals of the system; what feelings should the user experience when using the system.

Who	Do	Be	Feel
Children	Allow children to complete dot pattern joining test with 3 different subtasks: copy dot pattern normally, horizontally flipped, and vertically flipped	User friendly; game may have larger dots and wider dimensions to accomodate primary school participants	Fun
Test Administrator (e.g., teacher)	Display the test results immediately after test conclusion (Pass/Fail)	Reliable; no unfair/inconsistent results	Encouraging
	Send Pass/Fail results to backend	Audible	Motivating
	Provide verbal instructions to the child	Compatible across operating systems	Intriguing
	Allow each subtask to be attempted twice, providing a Fail result if failed both times.	Compatible across tablet/phone/laptop	
	As soon as child successfully completes subtask, move onto next task (if there are still outstanding subtasks).	Touch screen	
	Collect school information from each participant	Anonymous	
	Timer functionality while completing each subtask	Lightweight; low CPU usage	
		Extensible for future features	

		Easy to understand	

🌟 Motivational Model

Motivational model obtained by transforming the above lists. This aims to give client a better visualisation of the requirements and aids understanding of any complex goals.
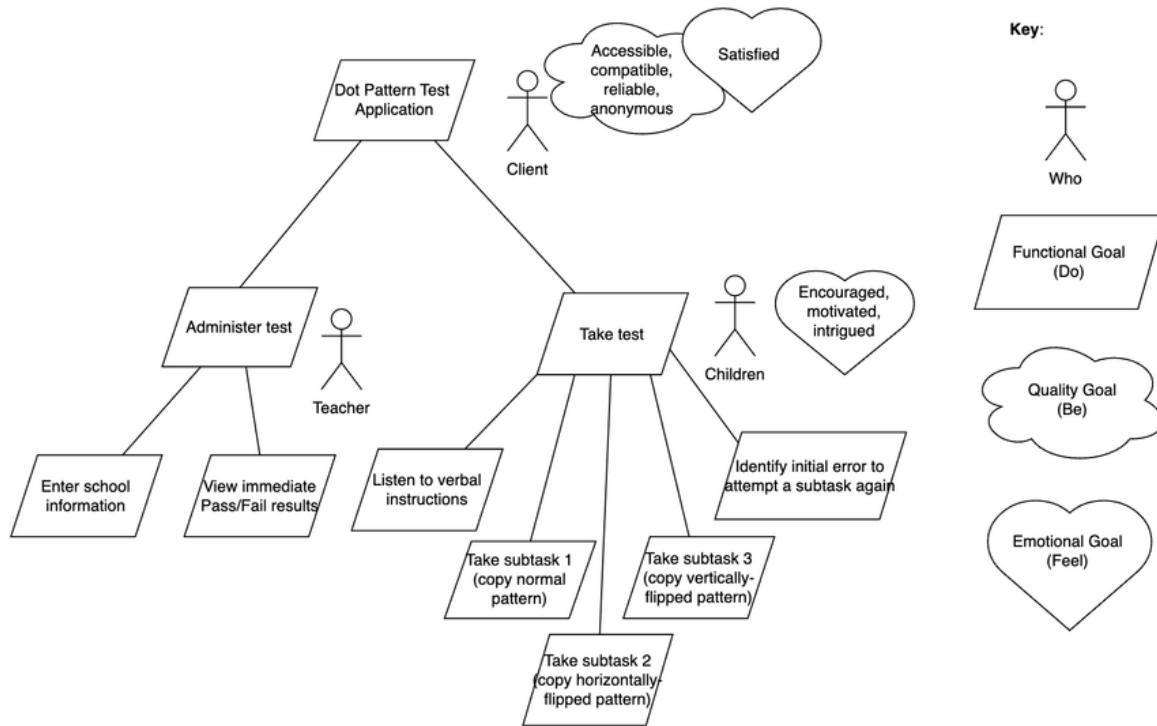
Product requirements

Owned by Anita Yang •••
Last updated: Oct 27, 2023 by Fiona Zhang • 📈 See how many people viewed this page

> 📘 This page clarifies all the functional (including optional ones) and non-functional requirements and linking them to the user stories.

📋 Functional requirements

Requirements	User stories	Importance	Explanation
Make available apps on both iOS and Android platforms	As a student who is going to do the test, I want to see the app available on either iOS or Android app store, so that my device can access the app without the limit of the operating system.	High	React native can satisfy this but we finally chose Vue to develop a web app.
Make available apps on any devices including phone, tablet, and PC	As a test taker, I want to be able to access the app on any device, such that I can do the test using whatever device at my hand.	High	Required by client, that's one of the reason we decide to develop a web app.
QR code scanner to load children's accounts of one class	As a kid, I want to get my account and ID without typing anything, such that I easily start the test.	High	After communicating with backend groups, we chose QR code as information pack for a class.
Children can not access the test in the app without the permission of their teachers	As a research team, we want the children to use our app to do the tests under the supervision of teachers, such that the children will take the test seriously.	High	If some naughty children start a test but just play it for fun, then those test results are not valuable to study. We would apply a verification system.
Run all the tasks in the question bank correctly	As a test provider, I want to make sure that every task is correctly implemented, so that we can collect true and useful test results.	High	The game logic may be implemented using lists in Javascript which is quite easy.
Display an instruction for each subtask at transition	As a primary school student, I want to make clear the task requirement, such that better performance may be shown	High	The app will go to next page after an indication of acknowledgement from the child
Children can rub and correct their mistake at any time before the submission	As a 5-12 year old kid, I want to rub and correct my answer during the test whenever I find something wrong, such that it allows me more chances to complete a deliberate bypass.	High	This requirement is specified in the appendix.

Test taker can draw the pattern with several segments	As a kid, I want to draw the pattern in separate segments, such that I can take more considerations.	High	Every pattern can be drawn within one stroke but drawing in several segments still needs to follow the direction and order of the pattern.
Allow the test takers to confirm their submission by asking "do you think the pattern looks correct"	As the research team, we want to give the tester a chance to confirm their response, such that the tester will only lose one mark if they can succeed in finishing the task in the second trial.	High	This requirement is specified in the appendix.
Apply reasonable marking schemes	As a statistician, I want to receive data sets coming out from a well-defined marking system, so that the outcome of my data analysis is valuable for research.	High	The marking scheme has already been provided in the appendix by Christine.
Store test results with a unique id for each completed test along with the name, age and grade of the tester and send to the backend	As a development team, we want to store the results after responders finished the tasks, so that future data analysis can be carried out.	High	We need to prepare data for backend which is data analysis.
Voice or video instruction	As a person who has never been exposed to such tests, I want to have a voice or video instruction to show me the rules of the game and the steps to complete these tasks, such that I may have better performance.	Mid	Three instructions are needed for copying a pattern, lateral flip, and vertical flip.
Partial mode	As a teacher, I want to allow some students to only finish the fist subtask and then would be able to exit the test.	Mid	Children under 7 yeas old will only do the first level.
[Optimal] Auto timer within the system	As the research team, we want to get more outcomes beside the test score, like the time a tester used to complete the test, such that we have more data to study.	Mid	After reading Christine's paper, we think timing is an element we need to take into consideration.
[Optional] Playground	As a participant, I want to have some simple practice before entering the formal test, such that I get a better understanding of what I'm going to do.	Low	Give out some randomly generated simple problems for beginners to practise just like unimelb before the final exam. And the research shows that getting prior experience

			before playing the game will not affect results.

📄 Non-functional requirements

Requirements	User stories	Importance	Explanation
Elaborate user interface (user experience)	As a 5-12 year old child, I want to use an app with a fancy interface and understandable and succinct instructions, so that I will show interest and it will be easy for me to do something on that app.	High	Due to the particularity of our testee, a great effort will be taken to design UI and improve UX.
Future extension	As a product owner, I want my app to allow extension, such that we can easily add new features when we have more question banks, or testing systems in the future.	Mid	A good software should have extendability.
Fast response time	As an app user, I want to be able to quickly load the app's page, so that I can access the content without experiencing frustrating delays.	Mid	An app which is not quite complicated should have good performance.
Responsive design	As a user, I want the app to fit well on any device screen I may use, so that I can have a better user experience.	Mid	A good software should behave well on different configurations.
Privacy	As a user, I want to protect my basic info and test score, so that I would feel safe when using this app.	High	All data transmission will be over HTTPS, at front end, never display test score.