LEGO DESIGNER

Lego

Mobile application design

THE BRIEF

The Challenge:

To encourage kids between the ages of 6-12 and their parents to use Lego for creative play!

To use digital storytelling, interaction design, and/or experience design to encourage younger audiences (or their parents) to pick up Lego and play for fun!

To encourage kids and their parents to play for the sake of it, with no goal at the end!

The Project goal:

The design solution needs to encourage creativity,

align with Lego’s core values of discovery, impact and teamwork,

and fit in with increasingly busy lifestyles.

THE AUDIENCE

- Children between the age of 6-12 looking for a fun and creative activity.
- Children who enjoy open-ended play and using their imaginations to create interesting worlds and objects.
- Children who are over-scheduled and often in transit from one activity to another seeking a way to decompress and enjoy a creative pursuit.
- Parents who want their children to spend more time on creative pursuits.
- Parents who want to share a common interest or hobby with their children.
- Parents and children who share a special interest in either Star Wars, Harry Potter, Jurassic Park and use Lego sets to act out their own stories and games.

LEGO DESIGNER AUDIENCE PERSONA 1:

Lin is 37-years old, she works for the ICBC bank of China and has two children aged 6 and 3. Lin feels guilty about how much time her children spend with her husbands parents, and how little time she has with them in the evenings. She works long-hours to save up for her children's education, and to help them have a good start in life. Lin was a good student in school and achieved good grades, but is sad to think of her own children not having a more fun childhood. When she was young there was no time to play and she doesn't want her children to miss out on opportunities to play. She want to foster creativity in her children, while ensuring that they engage in meaningful and educational activities. Lin is cautious of allowing them to play games as she's read many negative reports about the affect technology has on children and doesn't want them to develop digital dependency. Lin wants to find a hobby that the whole family can enjoy together.

"I want my children to have a more enjoyable childhood, I don't want them to just study all the time, I want them to have fun and play as well."

LEGO DESIGNER AUDIENCE PERSONA 2:

Oskar is 7-years old and lives with his family in a quiet suburb of a big city. He's just started grade 2 and he usually rides his bike to school with his mother. Oskar plays soccer on the weekends and attends swimming lessons once a week. He's looking forward to starting Karate classes and learning how to be a real ninja. He doesn't like practicing his sight words, but is pretty good at math. The favourite part of his day is recess when he can play J*urassic World* or *Star Wars* with his classmates. He loves playing with his toys and usually goes to his room after school to play for a while. The time lost in his imagination allows him to make sense of his day and role play different scenarios. His favourite toy is the Millennium Falcon he was given for his birthday. He really wants to build a Lego version of the spacecraft with his dad when he's old enough to follow along with the instructions.

"I really enjoy playing Jurassic World with my friends during recess."

THE CONCEPT

Explain the premise of your design solution covering the following points:

➢ Create an application for mobile phones and iPads

➢ The app will allow children to digitally create their own Lego designs.

➢ Lego currently has a webpage suitable for teenagers and adults to create their own designs.

➢ Leveraging the Universal Design Principle of Satisficing, we won't have to create a completely new design, we only need to adapt an existing product to suit a different target audience.

➢ Leveraging the UDP of Accessibility; instead of a website we will adapt the Lego designer page into a mobile application.

➢ Mobile applications are more accessible for a younger target audience.

➢ Leveraging the UDP of Iconic Representation; the application will consist of symbolic icons and words to increase the comprehension of key information in the application and aid in usability

➢ Leveraging the UDP of Hick's Law, the app will have limited options at each level for the user to choose from, to aid in the speed of navigation.

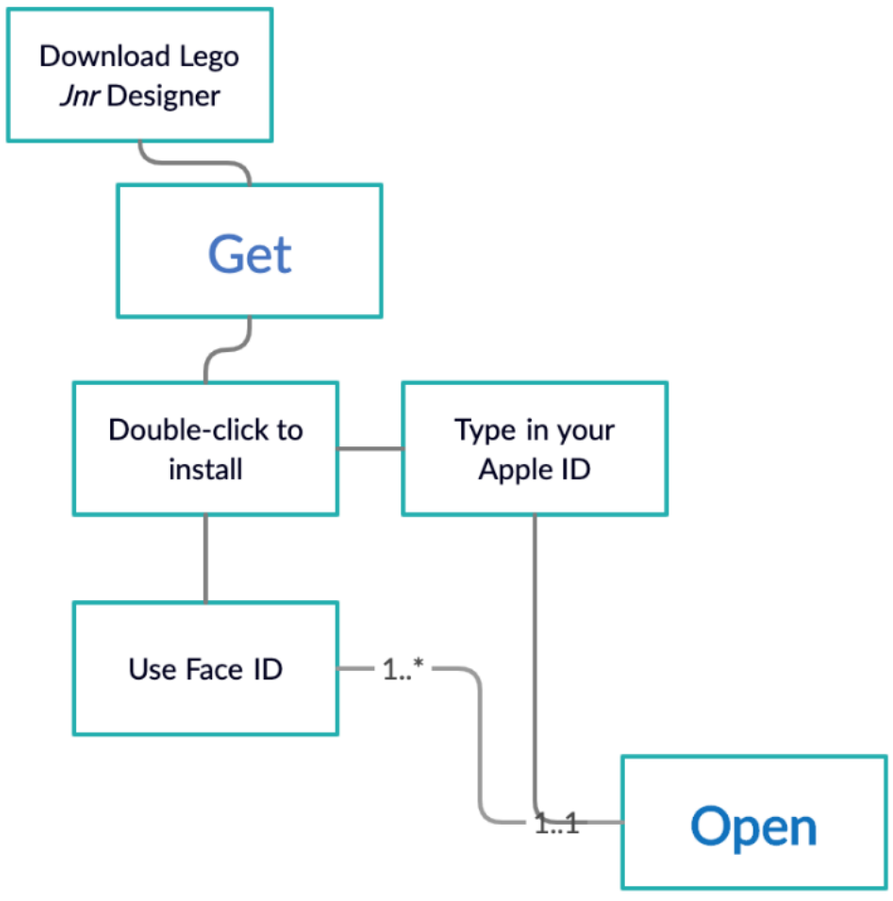
➢ Leveraging the UDP of Archetypes the app will have themed worlds for children to draw inspiration and to act out fantasies.

➢ Leveraging the UDP of Propositional Density; the application will employ symbolically meaningful imagery to convey

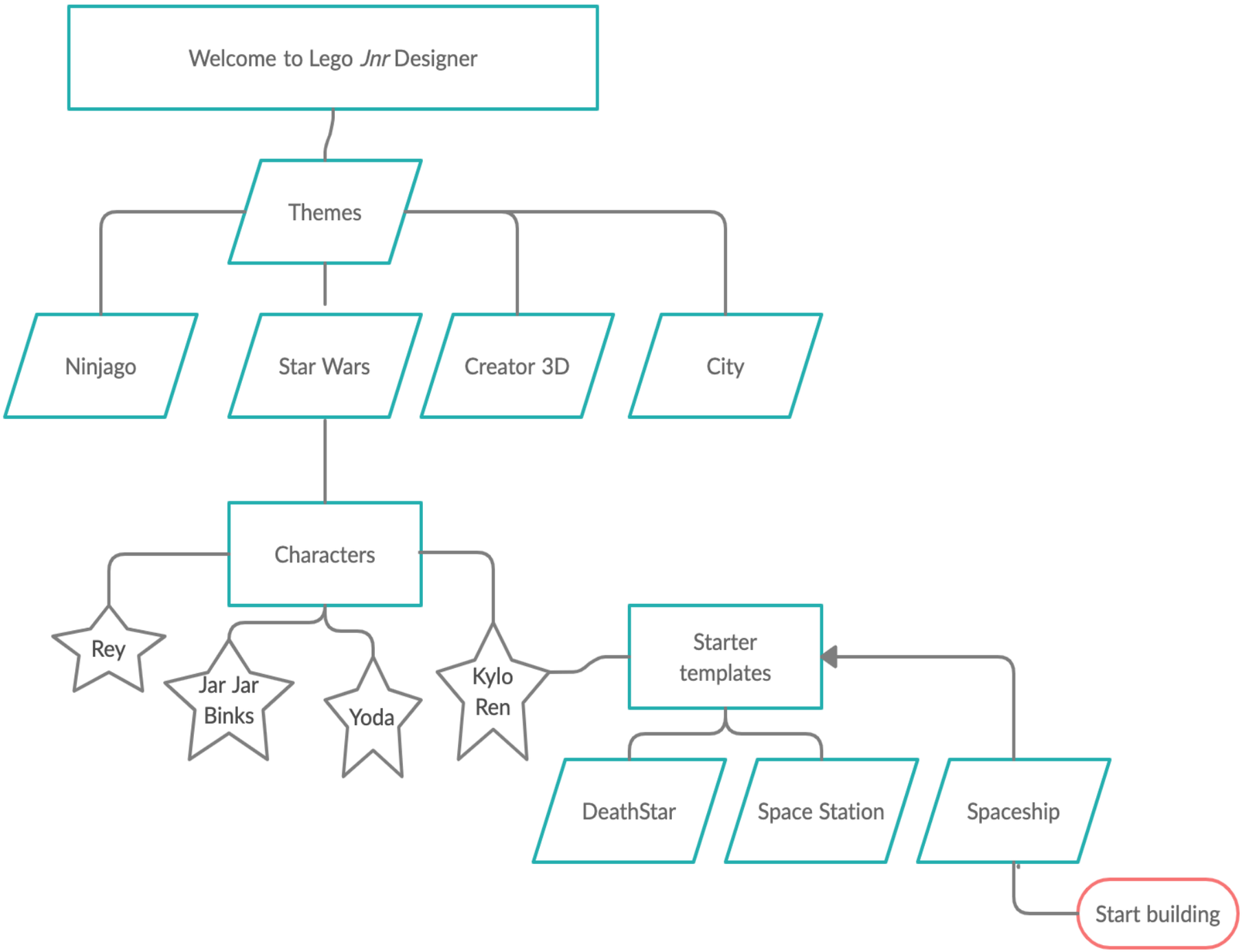
➢ A mobile application is easy to use in a car moving from one activity to the next.

➢ The mobile application will allow the children to engage in open ended play, creating new designs, with the added functionality of generating and downloading the instructions to build these designs in the real world during their free time.

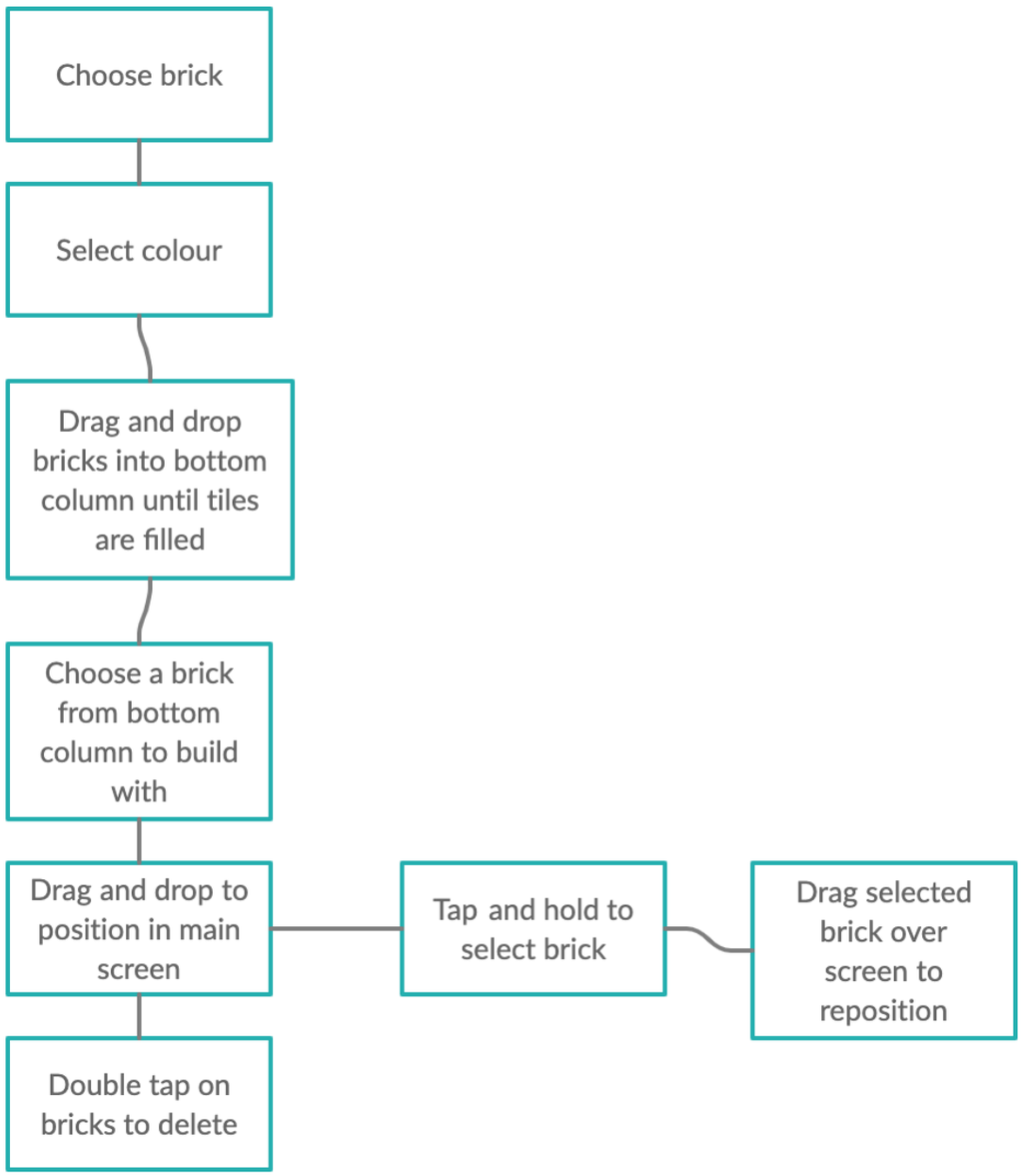
FLOW DIAGRAM OF SIGNING UP FOR LEGO *JNR* DESIGNER



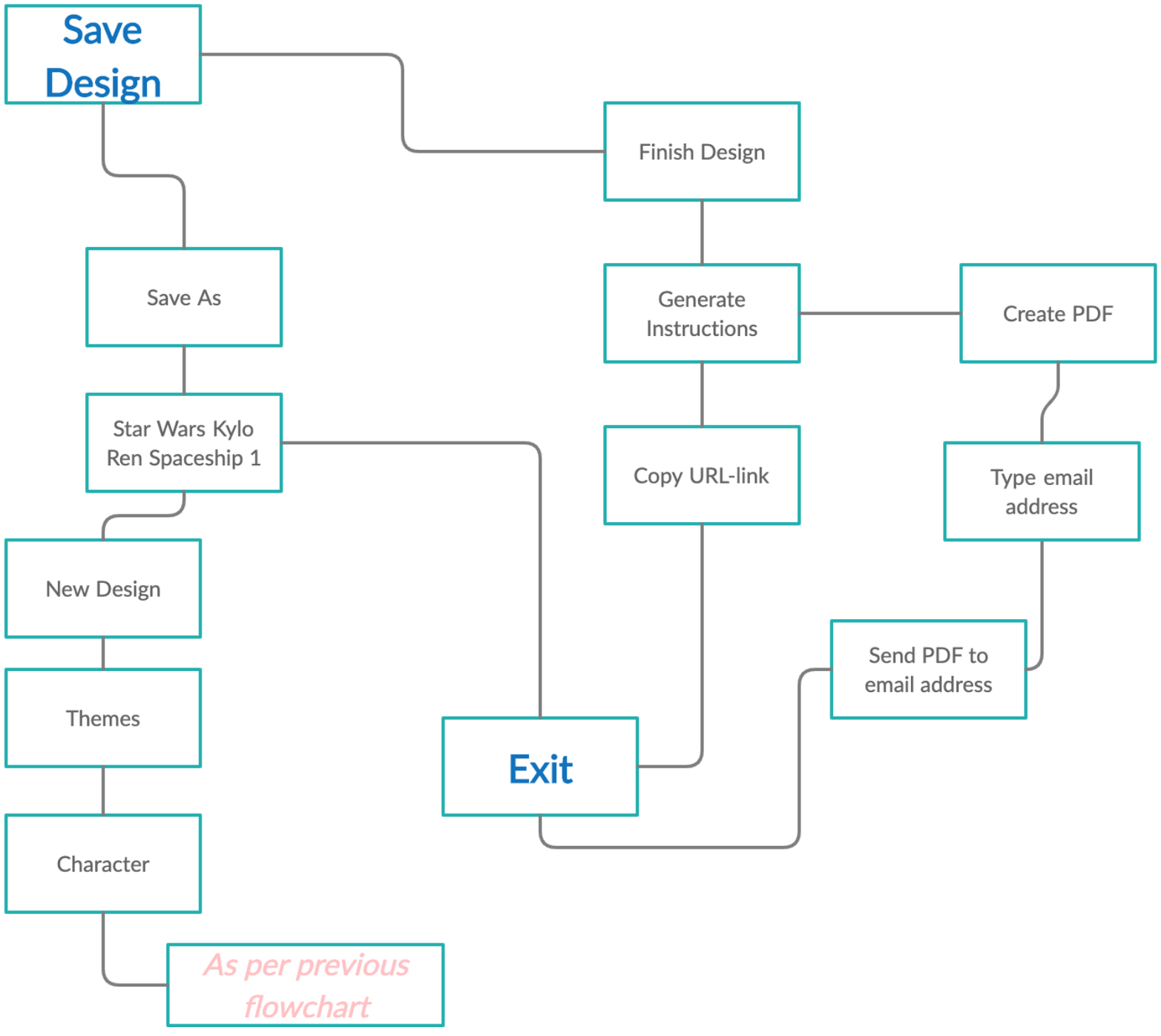
FLOW DIAGRAM OF USER EXPERIENCE



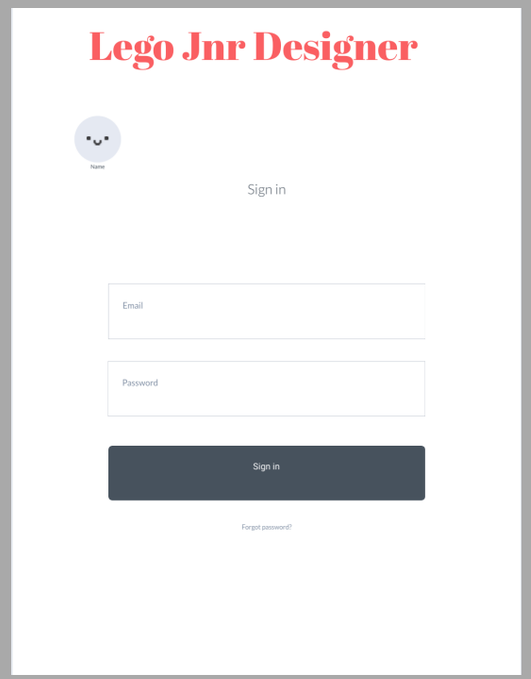
FLOW DIAGRAM OF BUILDING EXPERIENCE

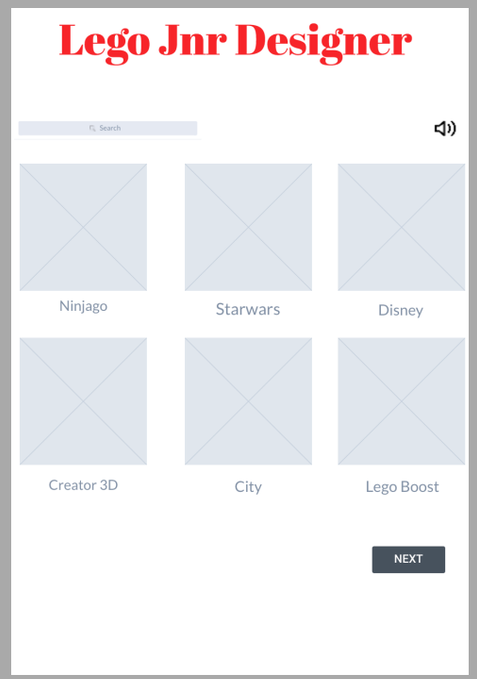


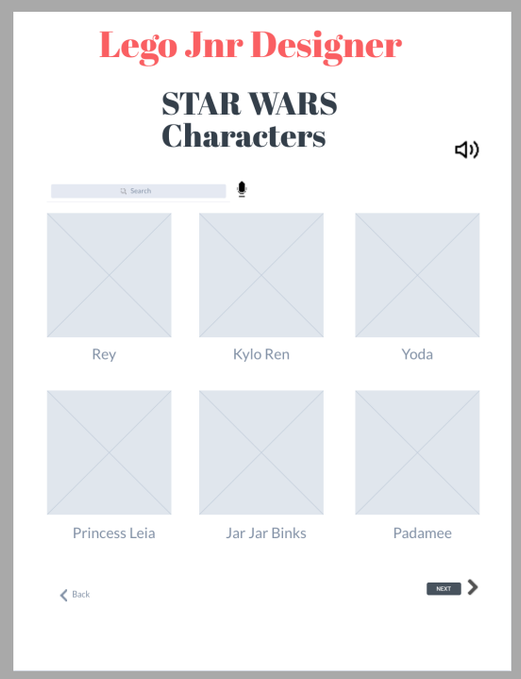
GENERATE DESIGN INSTRUCTIONS AND DOWNLOAD

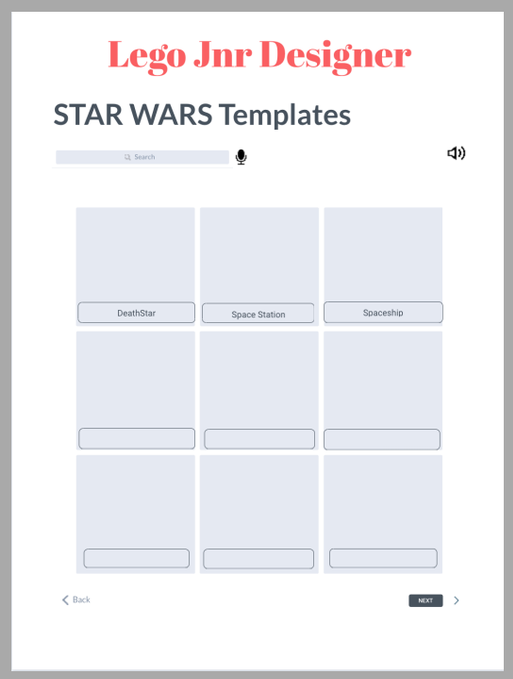


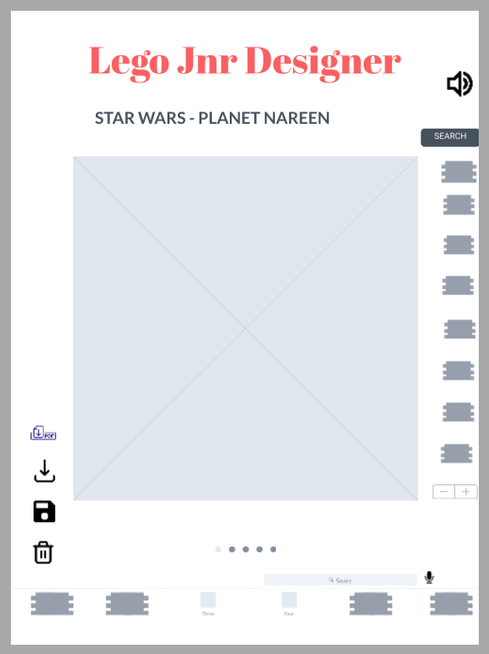
WIRE-FRAME MOCKUP

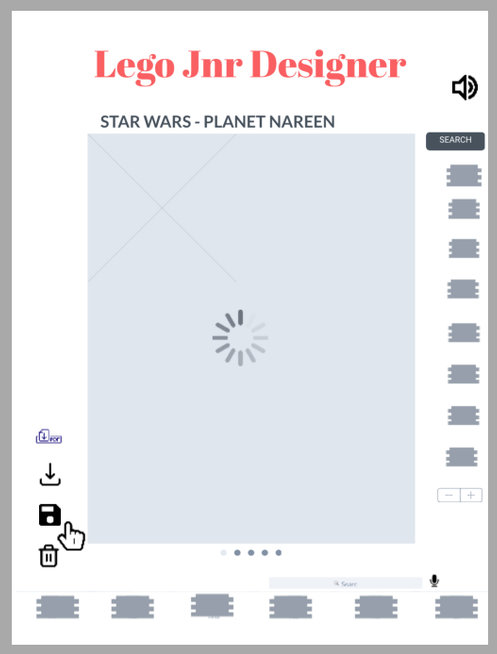


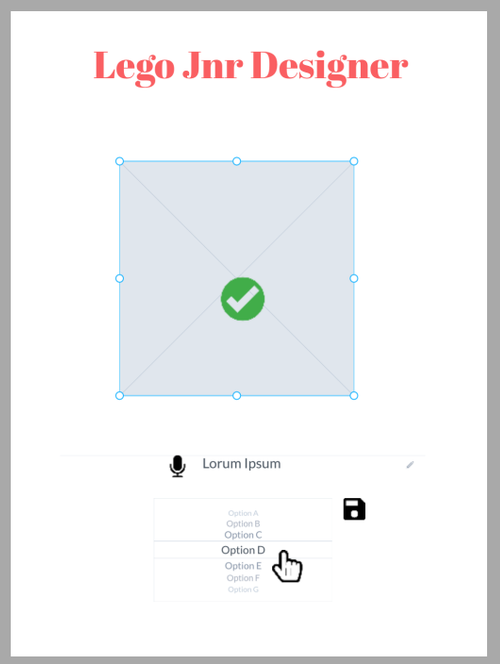


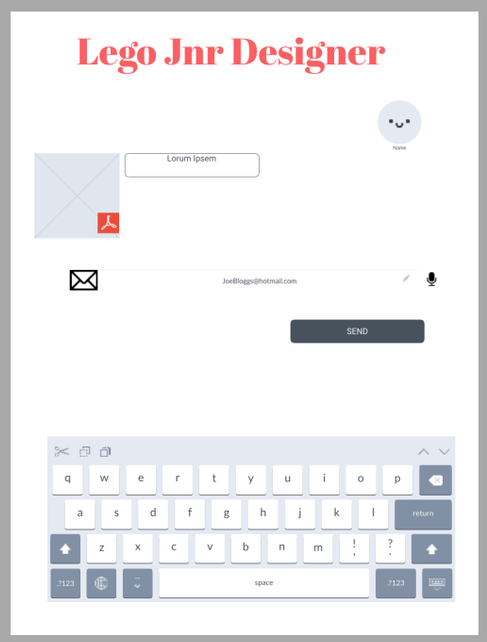




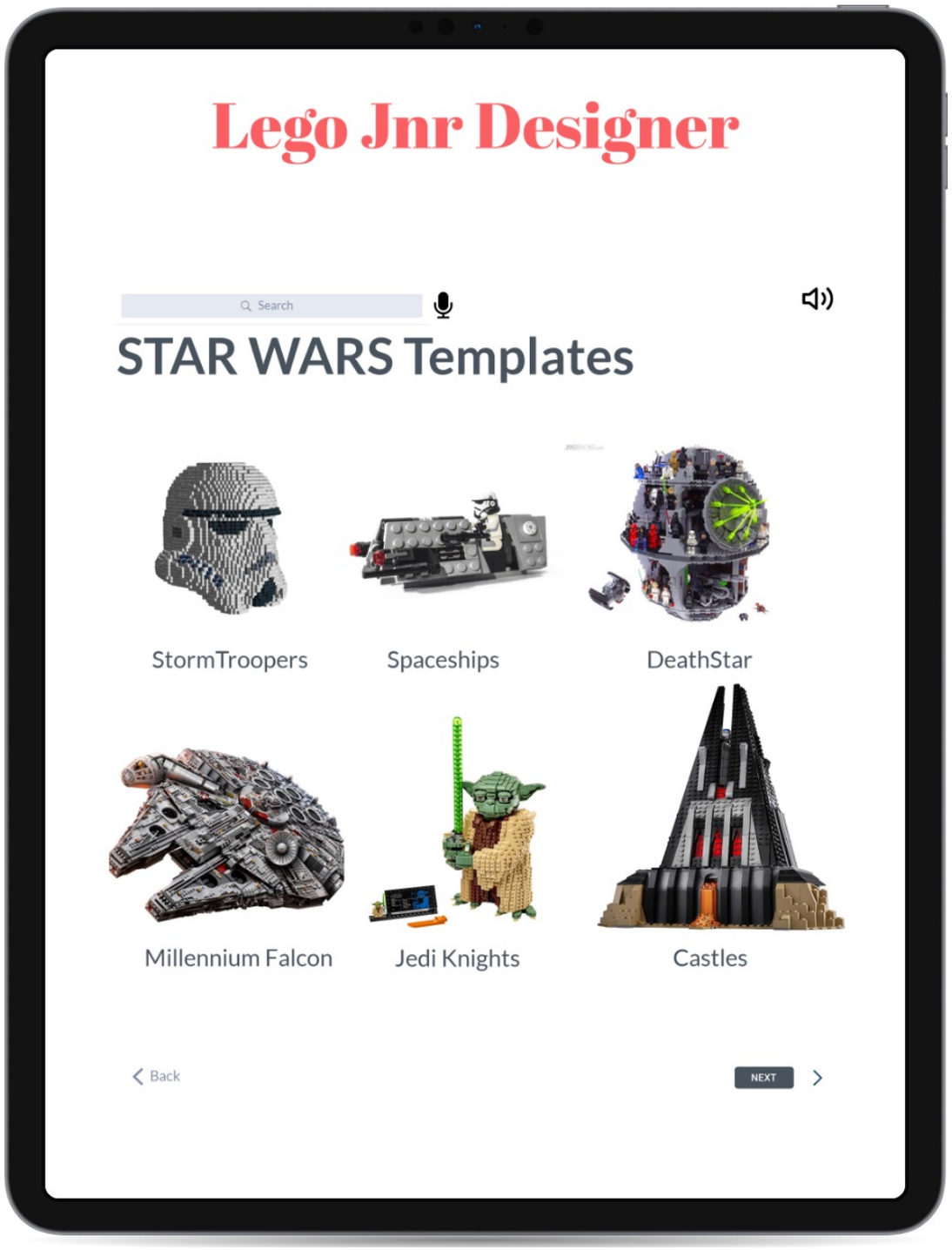








FINAL PROPOSED OUTCOME

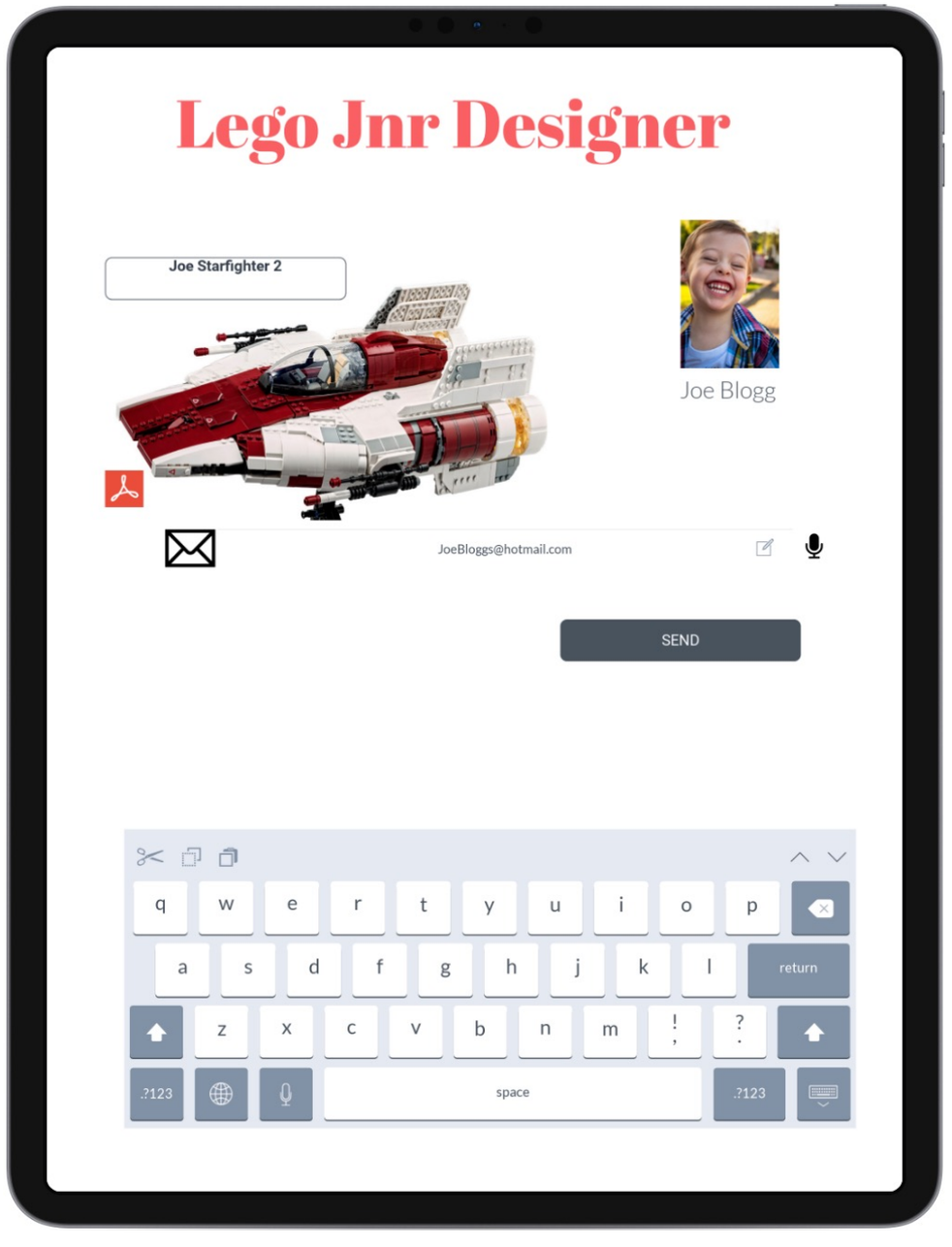


After choosing a theme, choose a design template

Build screen

FINAL PROPOSED OUTCOME

Save design and building plans



Send pdf of build plans to registered account email address.

RATIONALE

- Holloway et.al (2015) use the term ‘Digitods’ to refer to the generation of children born after the release of the first smartphone in 2007. Summers et. al. (2013) also refer to these children as having a high degree of digital literacy. Often having ready access to the internet and touchscreen devices.
- By choosing a mobile app we are able to address the design rationale of Affordance (Lidwell et.al. 2010). The app allows the user to creatively access and use it in a variety of settings, and situations. Paying attention to the UDP* of Flexibility-Usability Tradeoff, the mobile app allows the user to virtually design their build and then generate plans and instructions to then physically build their designs once they have access to their Lego blocks.
- The mobile app is a child focussed version of a webpage which Lego currently directs at an older audience. Considering the UDP of Satisficing, this app is not trying to create a completely new concept, but rather adapt an existing one to a new audience.
- This design addresses the client brief of inspiring creative play in children aged 6-12.
- The mobile app design employs the UDP of Storytelling by allowing the users to interact with themed worlds in which to inspire their Lego designs. The app uses setting such as *Star Wars, Disney, Jurassic Park* as well as characters to allow the user to act out their own stories and Lego designs.
- The Colour schemes create a child-friendly mood. The UDP of Ockham’s razor is employed, and the app is not cluttered with extra elements. As the app is targeting a age bracket which may not be highly literate most of the functions will be executed through voice commands and using a touch screen to move objects around.
- The UDP of Forgiveness is implemented by employing a high degree of intuition in the app. All actions are easily reversible, designs are frequently saved to ensure that what the user is working on is not inadvertently lost by not saving. There will be verbal confirmations and warnings to guide the user in using the app.
- The UDP of Performance Load is implemented, the user need only perform a small number of actions to achieve their desired outcome and a satisfactory result.
- The UDP of Stickiness is considered in the design rationale. The app is created to work simply, use stories to increase its memorability, the idea behind the app is simply and therefor concrete.
- The UDP of Legibility is considered in the typography of the mobile app. The typography is designed to be legible, low sensory so as not to tire the users eyes and pleasing to look at.

* All references to UDP refer to the Universal Design Principles of Lidwell, W, Kritina Holden and Jill Butler (2010), in their book of the same name.

CONCLUSION

- I designed a mobile app called *Lego Designer* which encourages the target audience (children aged 6-12) to use Lego for creative play.
- *Lego Designer* provides a platform for the target audience to create their own Lego designs, against a themed backdrop which correlates with existing Lego themed toys.
- *Lego Designer* then allows the target audience to generate instruction booklets of their designs to recreate these designs in their own homes with their siblings, friends and family.
- *Lego Designer* encourages the target audience to plan out their designs, play creatively, act out stories with their Lego builds and share their designs with others.
- *Lego Designer* is designed to be intuitive, accessible and convenient. The target audience can access the app in between activities, in transit or during their down time.
- Lego brand values place a strong emphasis on encouraging creative play, the open-ended nature of this app allows the target audience to design and build whatever they are able to imagine.
- *Lego Designer* borrows from an existing Lego design webpage, but is adapted to suit the needs of the target audience. It uses age appropriate technology, themes and outcomes to encourage effective use by the target audience.
- By adapting an existing idea the *Lego Designer* app is able to address the needs of a new target audience.

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