Rapid Prototyping

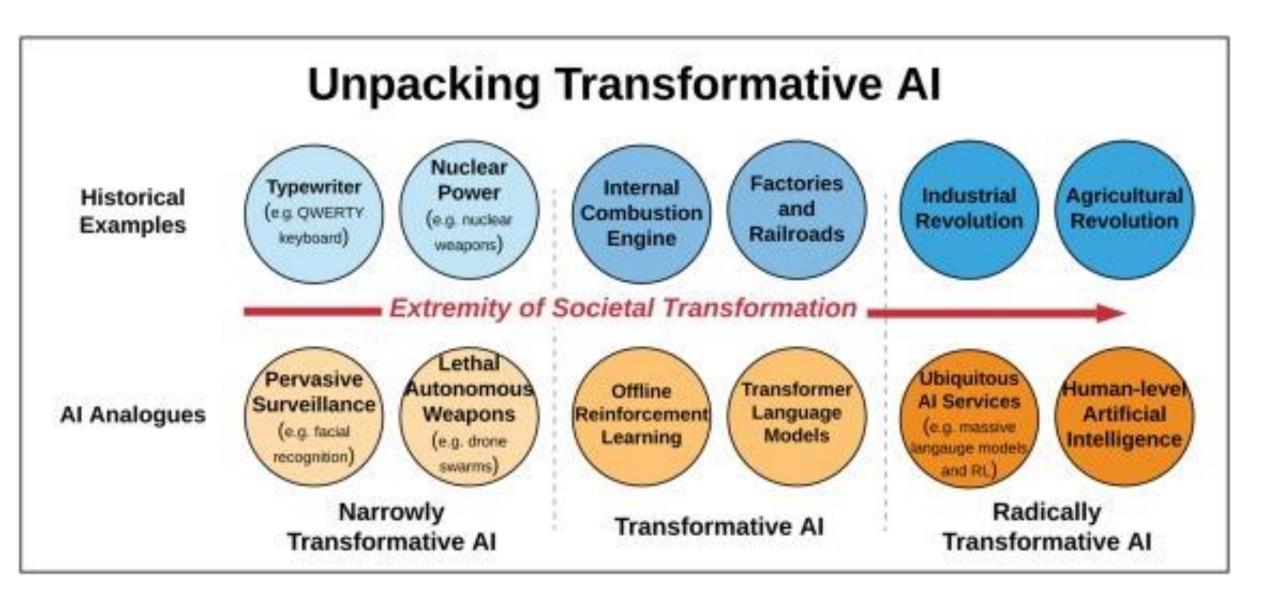
Using Al Assistance

AI will be Transformational

"...advanced AI systems whose long-term impacts may be as **profound as the** industrial revolution"

Zhang and Dafoe (2019)

Radically Transformative AI?



Learning Objectives

- Understand the Role of AI in Rapid Prototyping Learn how AI can assist in accelerating design workflows, from ideation to high-fidelity prototyping.
- Apply the Double Diamond Process Use structured UX methodologies to define, develop, and validate design concepts efficiently.
- Explore AI-Powered UX Tools Gain hands-on experience with Figma, FigJam, Miro, UX Copilot, and other AI-assisted design platforms to create user flows, wireframes, and prototypes.
- **Develop User-Centered Personas & User Stories** Learn how to generate and refine **personas and user stories** using AI, ensuring solutions align with real user needs.
- Translate User Stories into User Flows & Wireframes Use AI to visualize user interactions, create structured wireframes, and optimize navigation for an intuitive UX.
- Design & Prototype with Al-Generated Components Leverage Al tools to auto-generate UI elements, define color schemes, typography, and accessibility standards.
- Improve AI Prompting Skills for UX Design Learn how to craft precise AI prompts to guide AI tools effectively and ensure high-quality design outputs

Tools for Workshop

A Little Blackbird

Tools we will be using...

- Figma and Figjam (https://www.figma.com/)
- Miro (https://miro.com/)
- Beta Version of UX Copilot. You can check in the workshop if you can gain access. https://uxpilot.ai/?ref=fiona
- Files: https://github.com/FunFizz/Blackbird/
- Results: Teams Chat or Padlet (provided on day of workshop)

The Inspiration

A Little Blackbird

Inspiration: Ancient Black Bird Poem

Original Old Irish

Int én bec ro léc feit do rinn guip glanbuidi fo-ceird faíd ós Loch Laíg lon do chraíb charnbuidi

Seamus Heaney's Translation

The small bird chirp-chirruped: yellow neb, a note-spurt.

Blackbird over Lagan water, clumps of yellow whin-burst!

Ciaran Carson's Translation

The little bird that whistled shrill from the nib of its yellow bill

a note let go o'er Belfast Lough a blackbird from a yellow whin

Different LLMs: Different Translations!

Chat GPT

The little bird
that whistled shrill
from the nib of
its yellow bill.
It sent a call
over Belfast Lough,
a blackbird from
a yellow whin (gorse bush).

Deep Seek

The small bird sings a tune on the tip of a branch, bright yellow.

It sends forth a melody above Loch Laíg, a blackbird from a branch of yellow berries.

Claude

The little bird sang a sweet lay with the point of its clean-yellow beak It cast a long shadow over Loch Laíg, a blackbird on a golden branch"

Is there Irish to Speech? What is wrong with this Audio?



https://elevenlabs.io/app/speech-synthesis/text-to-speech

The Blackbird Trail App

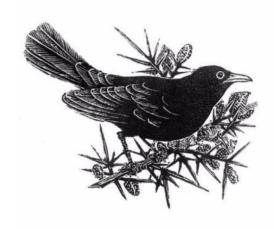
The **Blackbird Trail App** is an **interactive learning experience** inspired by *The Blackbird* poem, set in **Belfast Lough**.

It guides students through a **nature-based trail** where they **scan QR codes at different stations** to unlock **poem fragments** and engage in **learning activities**.

Each scan presents a **task**, such as answering a question, uploading a photo for AI recognition, or writing a reflection, reinforcing **literacy**, **environmental awareness**, **and creative thinking**.

As students progress, a **tracker updates their completion status**, and upon finishing the trail, they receive the **full poem as a reward**.

The app blends **nature**, **poetry**, **and technology**, creating an **immersive**, **multimodal educational journey**.



Transcript...to... Personas

Imagine we interviewed 3 users, using Otter.ai to record the interviews.

Tim - National Trust

Shay – Child User

Caroline- Educator

GROUP ACTIVITY: Personas

Using any generative AI tool of your choice craft a prompt to create a persona for each user limiting this to a picture, role name and once sentence describing their overall persona.

A persona of course will have more detail but lets just minimise the work in this workshop.

Personas



Shay (Explorer)

Needs fun, structured engagement, loves collecting. Board gamestyle UI, poetry collection challenge



Tim (National Trust)

Visitor engagement, making learning interactive.
Al-powered bird/tree recognition, gamified heritage experiences.



Caroline (Educator)

Tracking engagement outdoors, offline access.

QR-based progress tracking, automated activity logs

Persona...to..User Stories

Group Activity

 Prompt a LLM of your choice to create 5 user stories for each persona based on the provided interview transcripts and personas.

A user story is a simple, clear statement that captures the needs and goals of a user, written in the following format: As [name], a [type of user], I want to [goal], so that [reason].

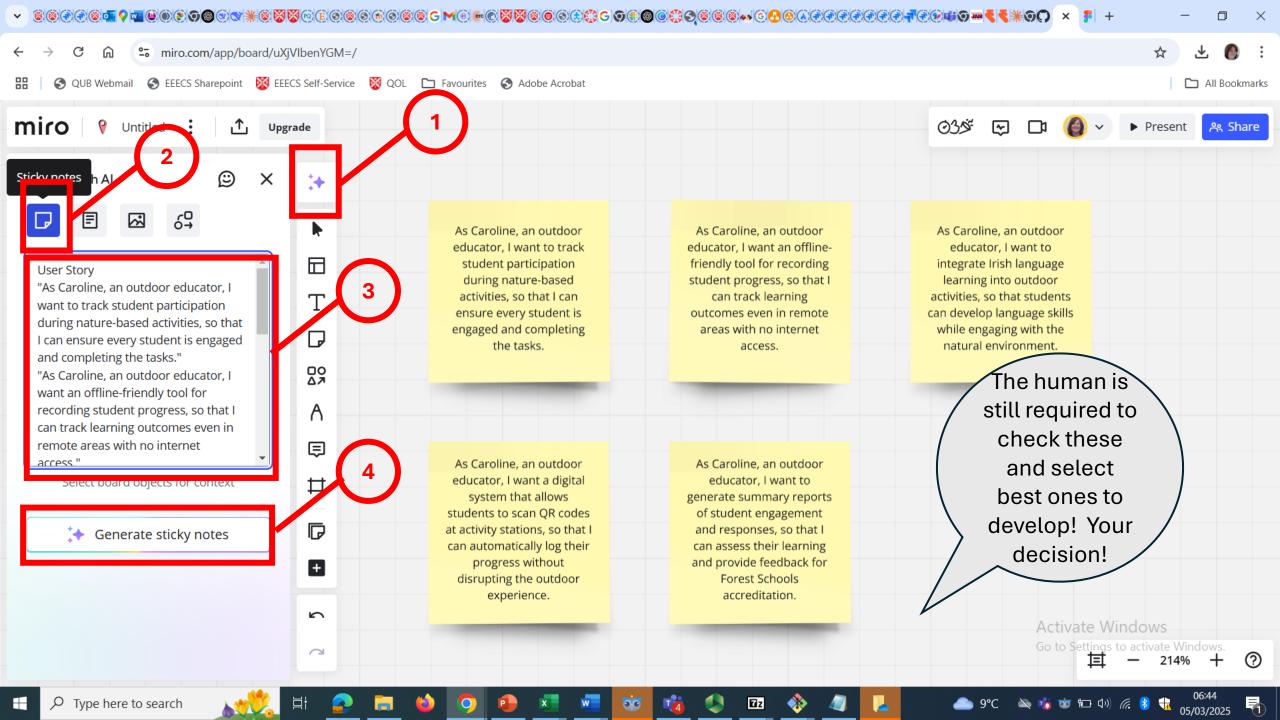
Crafting A Prompt for User Stories

Do you think this is a good prompt?

- Please create a set of user stories for each persona mentioned in the following interview transcripts. Each user story should be written in the format: As [name], a [type of user], I want to [goal], so that [reason].
- The user stories should capture the needs, goals, and challenges of each persona as described in the transcripts. Please generate a total of 5 user stories for each persona.
- Here are the transcripts: 1. Interview with Caroline, an outdoor educator: [insert Caroline's transcript here] 2. Interview with Tim, an eco-warrior, National Trust Representative: [insert Tim's transcript here] 3. Interview with Shay, a curious explorer, child participant: [insert Shay's transcript here]

Demo in FigJam and Miro

CSV format to Sticky Notes

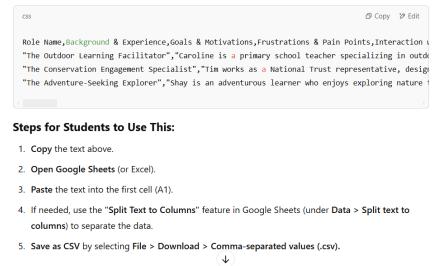


CSV Format is Useful

- Sometimes it is hard to get the format you want but you can ask the LLM to output in a format (e.g. CSV or JSON) that can be uploaded to another tool such as FigJam or Jira.
- Here we use user stories formatted in csv format by Chat GPT

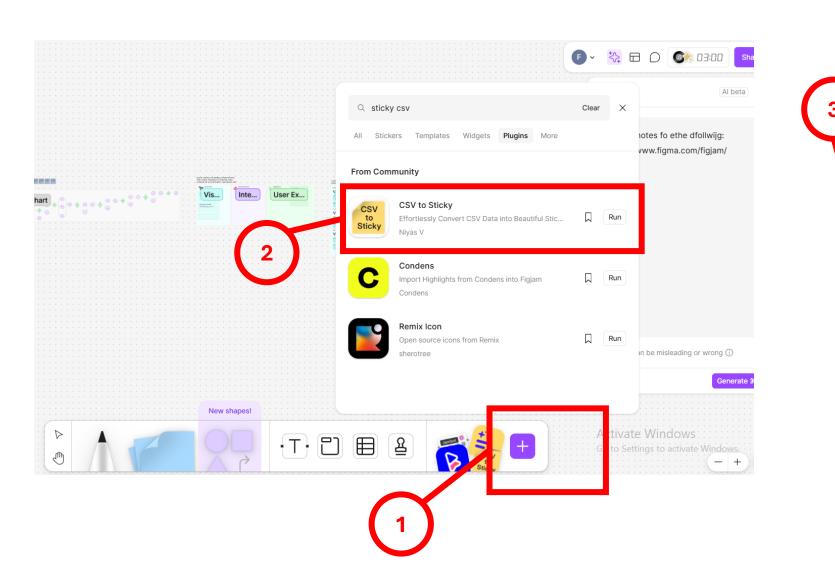
https://github.com/FunFizz/Blackbird/tree/main/CSV%20to%20User%20Stories

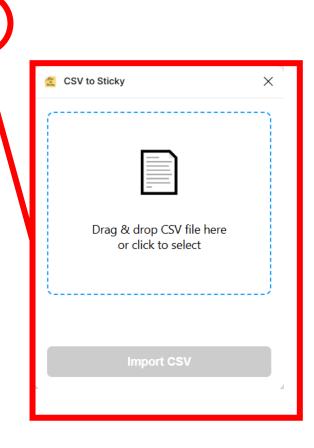
CSV Format (Copy and Paste into a Text File or Spreadsheet)



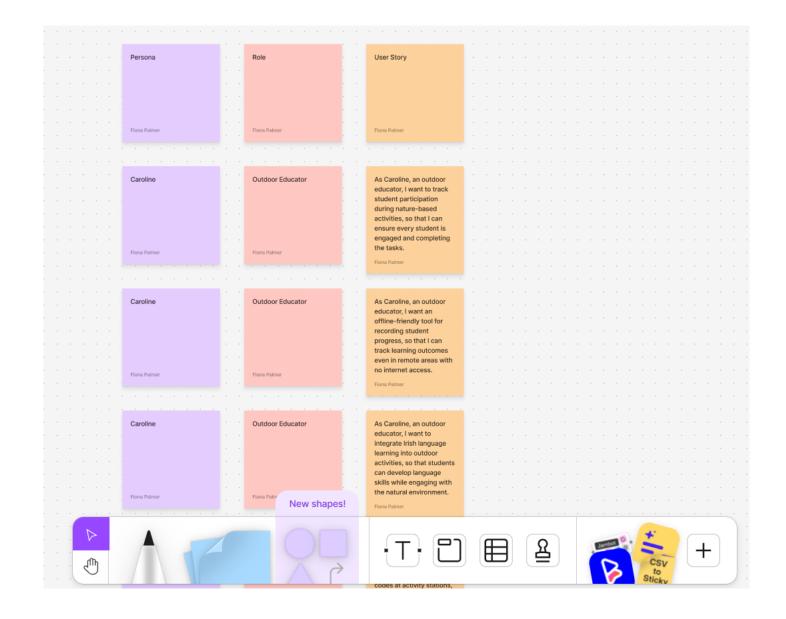


CSV to Sticky Tool in FigJam





Result



User Stories...to...User Flows

Group Activity

- Ask an LLM to create a User Flow Diagram for one of the users of the new Blackbird Forest Trail App from the perspective of a UX designer.
- You may adapt this prompt as a starting point:

*"Create a **UX user flow diagram** for **Caroline, an Outdoor Educator**, as students participate in an **interactive poetry collection activity** using QR codes. The diagram should follow a **happy path**, where students **scan QR codes at three stations**, each revealing a **poem fragment from the blackboard**, based on *Ciaran Carson's translation of "The Blackbird"*.

At each station, students must **complete an activity** related to the poem before they can proceed. The final step **rewards students** by displaying or reading aloud the **assembled poem** once all fragments are collected.

Use **decision points** to allow for **scan retries** if a QR code fails, ensuring students do not move forward without capturing the required fragment. However, once a station is completed, students **cannot return to previous stations**. Loops should exist **within each station** to **allow retrying the scan and completing activities** before moving forward. The flow should reflect engagement with the poem and its themes, aligning with Caroline's needs from the UX interview transcript."*

You need to think like a UX Designer and specify what you want..

Demo

Chat GPT...to...Miro

Extract of Prompt for Miro

All collected poem fragments are displayed & read aloud.

Students review their completed tasks & receive a reward (e.g., digital badge).



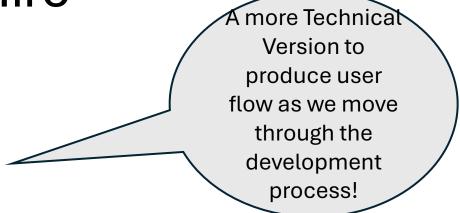
A How to Represent in Miro

Start node → "Scan Main QR Code at Central Station"

Activity nodes → Each task (Quiz, AI Photo Upload, Reflection)

Looping path → Arrow back to QR Code Scan before assigning the next task

Decision diamonds → "Did student complete the task?"



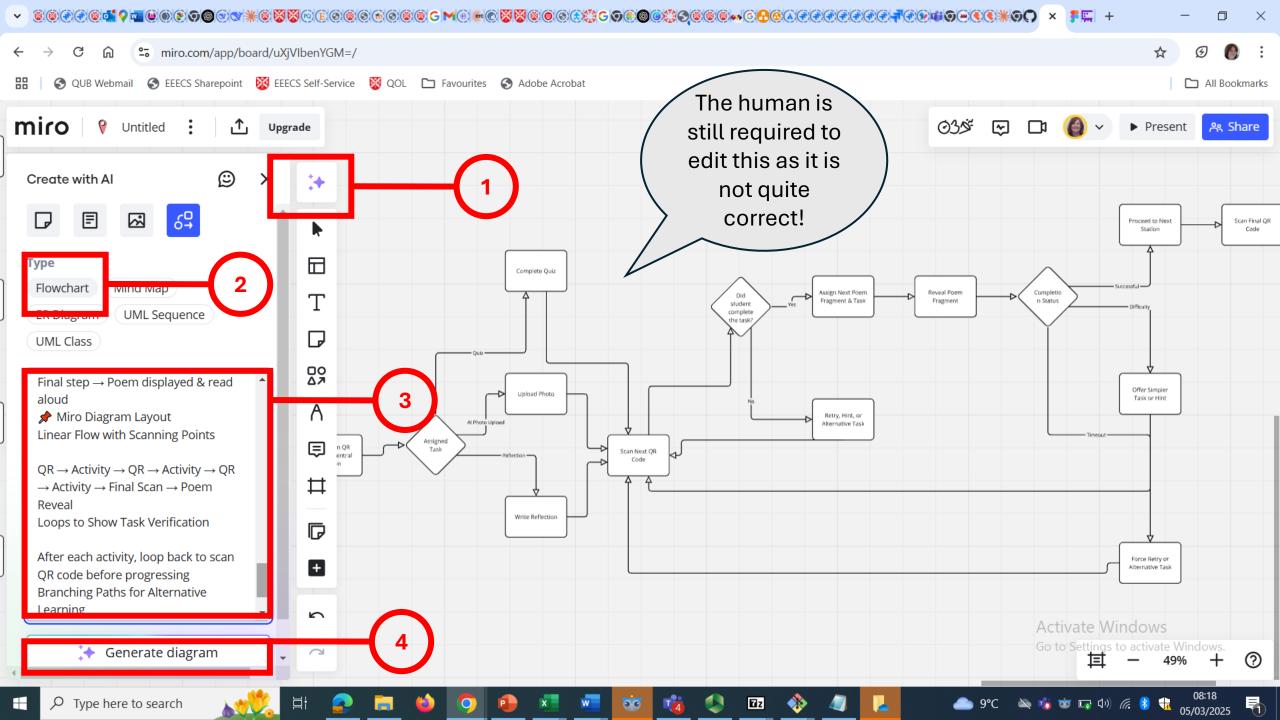
Yes → Assign next poem fragment & task

No → Retry, hint, or alternative path

Final step → Poem displayed & read aloud



Linear Flow with Scanning Points



User Flows...to Wireframes

Group Activity

- As part of wireframing the interactive poetry collection app, your task is to handdraw a wireframe for a screen that represents the Poem Fragment Reward & Progress Tracker.
- This screen appears after a student successfully completes an activity assigned through a QR code scan.
- Here, they will see a **newly unlocked poem fragment** from *The Blackbird* displayed clearly, reinforcing their progress in collecting the full poem.
- A progress indicator will show how many fragments they have collected so far, helping them track their journey.
- The screen also provides a **way to move forward**, guiding them to scan the next QR code for their next challenge.
- The focus of this screen is to **reward the student's effort**, show their progress in a meaningful way, and ensure a smooth transition to the next stage of the experience.
- Use an LLM to help you with this task.

Prompt for Chat GPT

You need to interrogate the LLM like a UX designer!

*"Generate a mobile wireframe layout for the Poem Fragment Reward & Progest Tracker screen in an interactive poetry collection app. The output should be a structured, minimalistic wireframe, designed for mobile-first usability (Android frame), ensuring clear content positioning without additional styling or animations.

The wireframe should display a newly unlocked poem fragment from The Blackbird by Ciaran Carson. Example text:"The little bird that whistled shrill from the nib of its yellow bill"

Include the following key components: A progress tracker to indicate completion status. Navigation buttons for seamless user flow. An optional 'Play Audio' button to support multimodal learning and accessibility.

Apply UX principles to enhance usability and engagement: Hick's Law – Simplified interactions for efficiency. Fitts' Law – Ensuring touch-friendly elements for accessibility.

Progressive Disclosure – Gradually revealing content to maintain engagement and motivation.

Focus only on content positioning and layout structure, avoiding unnecessary embellishments.

Additionally, suggest how to generate and visually structure this layout in Figma or UX Copilot, ensuring an intuitive and structured wireframe based on these specifications."*

Demo

Visualising in UX CoPilot

At the time of presentation there were limited options for transferring to Figma on free scheme but this may rapidly change...

Prompt for Wireframe

*"Generate a mobile wireframe layout for the Poem Fragment Reward & Progress Tracker screen in an interactive poetry collection app. The output should be a structured, minimalistic wireframe, designed for mobile-first usability (Android frame), ensuring clear content positioning without additional styling or animations.

The wireframe should display a **newly unlocked poem fragment** from *The Blackbird* by Ciaran Carson. Example text:

"The little bird that whistled shrill from the nib of its yellow bill"

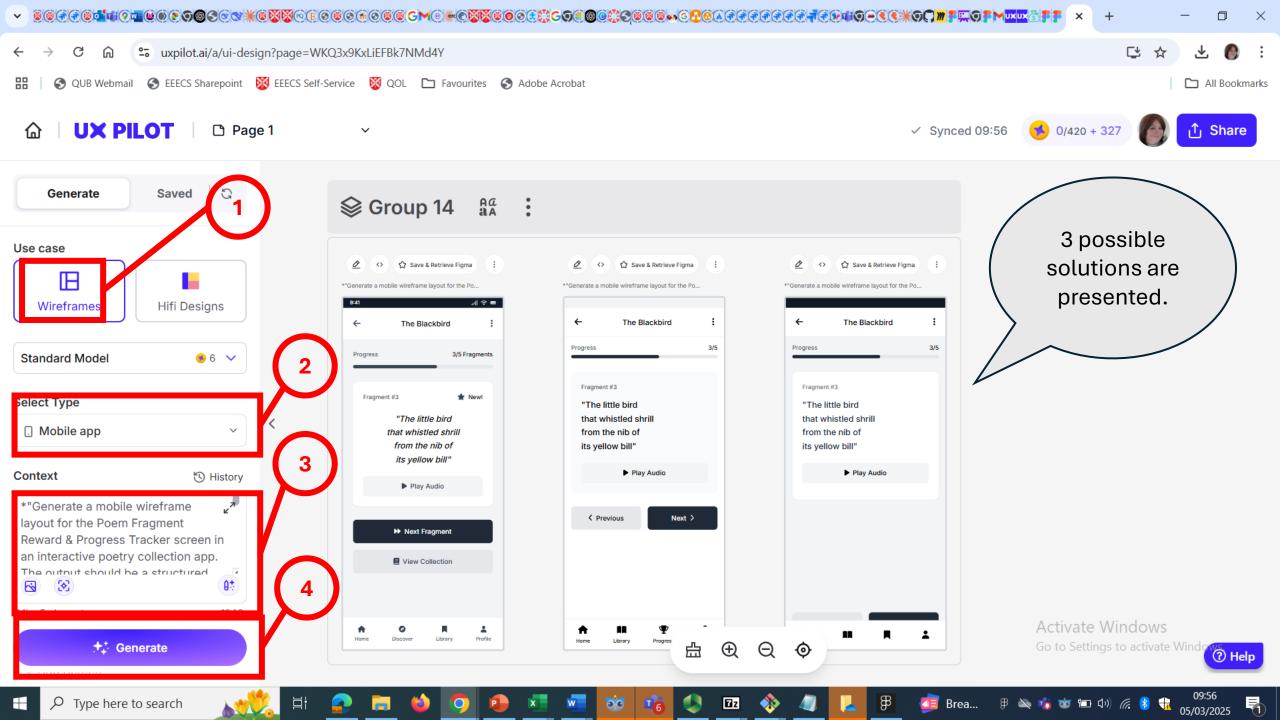
Include the following key components:

A progress tracker to indicate completion status.

Navigation buttons for seamless user flow.

We may specify some components to guide the design...

An optional 'Play Audio' button to support multimodal learning and accessibility.



Wireframes...to...High Fidelity Prototypes

Colours and Fonts

Group Activity: Font and Colour

- Using a LLM, prompt it to define a colour and font scheme for a high fidelity prototype.
- You may adapt the following example:

"Imagine you are a **UX designer** creating a **nature-inspired**, watercolor-themed **UI** for an **interactive learning app** based on *The Blackbird* poem set in **Belfast Lough**. Define a **typography system and color palette** that reflects the **serene lakeside environment**, using **soft watercolor textures**, **fluid organic elements**, **and natural tones** for an immersive learning experience. Choose a **primary handwritten-style font** for poetic text and a **secondary modern font** for UI clarity. ensuring accessibility and readability. The color palette show the **Belfast Lough's deep blues**, **misty greys**, **and ripption** speaking into Chat GPT as a designer...a new skill!

Results

- 🔸 锅 Color Palette
 - Deep Blue (#1B3B6F) Represents the calm waters of Belfast Lou/
 - Misty Grey (#B0B8C5) Captures the fog and soft sky reflections.
 - Rippling Green (#4A7C59) Symbolizes nature and the lough's surb movement.
 - Gorse Yellow (#FFD700) Inspired by the bright yellow gorse flowers, used as an accent.
 - Soft Beige (#F4E1C4) Mimics parchment for text boxes and UI elements.
- Typography Selection
 - Primary Font (Poetic Text): Reenie Beanie or Patrick Hand A handwritten-style font that evokes a natural, expressive feel.
 - Secondary Font (UI Clarity): Quicksand or Poppins A clean, modern font that ensures high readability for UI elements.

The human makes a decision...you might present these for user acceptance

Demo

Visualising in UX CoPilot

At the time of presentation there were limited options for transferring to Figma on free scheme but this may rapidly change...

Prompt for UX Pilot

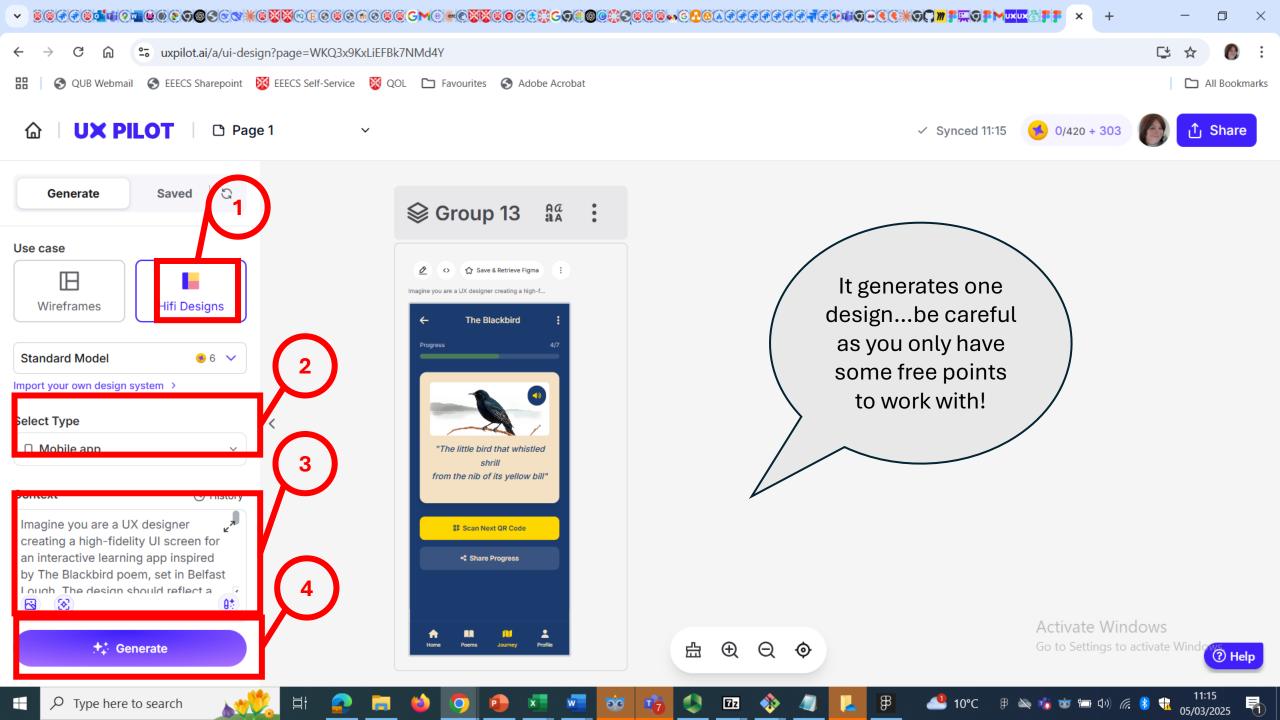
"Imagine you are a **UX designer** creating a high-fidelity UI screen for an **interactive learning app** inspired by *The Blackbird* poem, set in **Belfast Lough**. The design should reflect a **nature-inspired**, **watercolor aesthetic**, incorporating **fluid organic elements** and **soft**, **immersive tones**. The wireframe should display a newly unlocked poem fragment from The Blackbird by Ciaran Carson. Example text:"The little bird that whistled shrill from the nib of its yellow bill"

This screen represents the **Poem Fragment Reward & Progress Tracker**, where students unlock poem fragments after completing an activity. Use a **serene color palette**: **Deep Blue (#1B3B6F) for backgrounds, Misty Grey (#B0B8C5) for secondary UI elements, Rippling Green (#4A7C59) for progress trackers, Gorse Yellow (#FFD700) for interactive highlights, and Soft Beige (#F4E1C4) for parchment-like text areas.**

The layout should feature a **centered poem fragment display**, styled with **handwritten typography (Patrick Hand or Caveat) on a parchment-like container**, a **progress tracker above it**, visually represented with a brushstroke effect in **Rippling Green**, and a **'Next QR Code' button in Gorse Yellow** for intuitive navigation at the bottom.

Include an **optional 'Play Audio' button** using **Deep Blue with a contrasting Gorse Yellow speaker icon** to support multimodal engagement. Apply **Hick's Law** for simplified interactions, **Fitts' Law** for large, touch-friendly elements, and **Progressive Disclosure** to gradually reveal poem fragments, ensuring readability, accessibility, and engagement. **Generate a high-fidelity UI wireframe in UX Copilot, applying this structured layout, typography, and color scheme** to create an intuitive, visually rich experience."

Step into the shoes of a UX designer to get a result aligned with your previous decisions



Key Takeaways

- Al Prompts Can Be Challenging. Crafting the right prompt is essential to getting the desired outcome.
- Imagine Yourself in a Professional Role Taking on the mindset of an expert helps structure effective prompts.
- Use a Structured Approach Breaking tasks into clear steps improves AI output quality.
 Become more technical specific as you move through the steps.
- Decision-Making is Critical Evaluating each stage ensures the AI aligns with user needs. So continually interact and involve the user.
- Validation is Necessary Always check and refine AI-generated outputs to meet objectives.
- Future AI Should Be Agentic AI should assist human decision-making rather than replace it.
- Why Human Oversight is Essential Removing humans from the process risks misinterpretation, loss of creativity, and ethical concerns.
- The Best AI is Collaborative AI should streamline tasks, while humans provide validation, intuition, and ethical reasoning.

Adding Creativity

Consult an LLM to add a little creative touch to make your app stand out...ask it how to do it aswell!

Asking Chat GPT what I could add!

- Use Al-powered tools in Figma to create an interactive poetry animation where poem fragments appear dynamically as users progress.
- Start by using Al-assisted ideation tools like ChatGPT or FigJam Al to brainstorm animation styles, such as ink spreading, a gentle watercolor fade, or a flying blackbird effect.
- Design the UI with Figma AI plugins, generating a handwritten-style font, a watercolor-inspired background, and a progress tracker.
- Apply Smart Animate in Figma to create smooth transitions, using effects like text fade-ins, ink-like motion, or layered depth shifts.
- Enhance animations with Jitter Al for fluid effects, Runway ML for motion textures, or Haiku Animator for dynamic interactions.
- Finally, prototype and test in **Figma's interactive mode**, refining the experience with **Al-driven user testing tools like Maze AI** to ensure a seamless, immersive poetry reveal.

Further Work

This was just a taster...Al tools can help with much more...

It's transformative...here's a quick look at some...

Mind Mapping & User Research

- Create a Mind Map Use FigJam, Miro, or Whimsical with AIassisted clustering to organize user needs, LMS features, and pain points, helping to structure insights visually. AI Tool: Miro's AI-powered mind-mapping and Notion AI for idea clustering.
- Develop a Research Questionnaire Leverage ChatGPT, Google
 Forms AI, or Typeform AI to generate survey questions that validate
 user needs, pain points, and feature requirements. AI Tool: ChatGPT
 for question generation, Typeform AI for survey personalization.
- Prioritize & Group User Stories Use AI in FigJam, Miro, or Jira AI to auto-cluster sticky notes and apply frameworks like MoSCoW or RICE to prioritize features based on importance and feasibility. AI Tool: Jira AI for automated user story ranking, FigJam's AI sticky note sorter.



- Brainstorm Feature Ideas from User Stories Use Miro AI, ChatGPT, or Ideanote for AI-assisted feature brainstorming based on user story insights. AI Tool: ChatGPT for feature ideation, Miro AI for structured brainstorming sessions.
- Create a Site Map Use Miro or Octopus.do to generate a structured site map showing the app's content hierarchy and navigation flow. Al Tool: FlowMapp Al for automated site mapping.

Wireframing & High-Fidelity Design

- Generate Low-Fidelity Wireframes Use Balsamiq, FigJam, or Whimsical to create quick sketch-style wireframes, helping visualize basic layouts before high-fidelity designs. AI Tool: Figma's Wireframe plugin, Balsamiq AI for auto-generating layout structures.
- Create High-Fidelity UI Screens Use Figma AI or UX Copilot to transform wireframes into polished, interactive UI screens with predefined styles, typography, and structured layouts. AI Tool: Figma AI, Uizard for automated UI generation.
- Use AI for UI Styling & Theming Generate color palettes, typography systems, and UI styling using Khroma AI (for color palettes), ChatGPT (for UX theming), and Colormind (for AI-generated UI themes). AI Tool: Colormind for AI-powered palette generation, Figma's Design Tokens plugin for theming.
- Auto-Generate UI Components Use Figma AI or Anima to generate responsive buttons, navigation bars, progress trackers, and cards for a cohesive design system. AI Tool: Figma's Auto Layout + AI plugins, Anima AI for code-based design exports.
- Create Prototypes & User Testing Flows Use Figma, Proto.io, or Maze AI to create interactive prototypes, allowing AI-powered user testing and feedback analysis. AI Tool: Maze AI for usability testing, Figma's Smart Animate for AI-assisted prototyping.



Collecting & Structuring User Feedback

- Analyze Open-Ended Survey Responses Use ChatGPT, MonkeyLearn, or Qualtrics AI to summarize qualitative feedback, detect sentiment, and identify trends in user responses.
- Al Tool: MonkeyLearn for Al-powered text analysis, Qualtrics Al for automated survey insights.
- Cluster & Categorize Feedback Automatically Leverage Miro AI, Notion Al, or FigJam Al sticky note clustering to group similar user feedback points into themes (usability, accessibility, pain points, feature requests, etc.). Al Tool: Miro Al for auto-clustering notes, Notion Al for automatic organization.
- Prioritize User-Requested Features Use RICE or MoSCoW frameworks within Jira Al, Productboard, or Airfocus Al to rank and prioritize user feedback based on impact, effort, and feasibility. Al Tool: Productboard Al for feature prioritization, Jira AI for ranking user requests.

6 AI-Powered Usability Testing & Insights

Al-Assisted User Testing Analysis – Tools like Maze Al, Hotjar Al, or UserTesting Al provide automated analysis of user behavior, click patterns, and usability issues. Al Tool: Maze Al for usability session analysis, Hotjar Al for heatmap tracking.

Identify Usability Bottlenecks – Use UXtweak AI, Session AI, or FullStory AI to track user frustrations, drop-off points, and time spent on tasks. AI Tool: FullStory AI for journey analytics, UXtweak AI for UX friction detection.

Summarize Key Takeaways Automatically – Al tools like ChatGPT, Fireflies Al, or Otter Al can summarize usability session transcripts, interview notes, and feedback reports into key takeaways. Al Tool: Fireflies Al for automated usability session summaries, Otter Al for meeting insights.

Playing with Pictures

An image of a Blackbird on a gorse tree overlooking Belfast Lough on the Cave Hill with a water colour theme - what can you create?









