IMAGINE IOT
PROTOTYPE CHALLENGE

TEMPLATE FOR
SUBMISSION REQUIREMENTS

Template Description
This is a template that can be used for the Prototype Challenge included as part of the openSAP course "Imagine IoT."
Story
Make a case and tell your story.

How to write a Story?
Try to follow the Design Thinking process presented in week 3, refine your initial idea for your Internet of Things (IoT) prototype, and always keep in the back of your mind these two questions:

- “What am I trying to accomplish with this IoT prototype?”
- “Can I explain clearly the context and need for this IoT prototype in two minutes or with just a few paragraphs?”

Write out the story behind your IoT prototype and try to keep it to three paragraphs or less, definitely less than one page of text. Consider answering questions such as:

- “What industry or group of customers will this IoT prototype serve specifically?”
- “How will it be optimized to appeal to its users?”

Get Feedback
To the extent possible, consider sharing this short story with one or more friends who are unfamiliar with the specifics of this industry and who are also unfamiliar with IoT. Get their feedback and refine your story so that it’s more easily understood without any prerequisite knowledge. It should be a self-contained narrative free from esoteric references or unexplained acronyms. If this initial story is coherent and easy to understand, it will effectively set the stage for additional details captured in the next part of your IoT prototype’s story: the persona.

Try to write your story here:
Story

**Summary:**
A Elementary School Principal wants to educate & inspire her students on healthy and green living.

**Storyline:**
In today’s day and age healthy and green living will go a long way in protecting and enabling a better future for all the living beings in this planet earth. What would be a better place to start and nurture such principles in life than an elementary school. As a Principal of Healthy Valley Elementary School, Mrs. Rita Terra, wants to educate and inspire the next generation of responsible citizens with an active and green lifestyle. The children will understand active living and renewable energy through their daily school activities that are gamified for their fun. Mrs. Terra is provided with the tools of today’s technology to monitor and track progress of her schools’ goal.
Persona

Explain the needs, goals, and pain points addressed

What are personas?

Personas are fictional characters based on real data to represent user types. They are extremely useful when considering goals, desires, and limitations of your IoT prototype’s users and can help guide design decisions. Personas put a personal human face on otherwise abstract data you have about your users. Once you have completed your IoT prototype’s introductory story, you should try to engage potential users of your IoT prototype to understand their use case reality.

How to create a persona?

Try to document as much information as you can about your persona. What are the characteristics of the users who will use this IoT prototype? What are their tasks in their job? Who do they work with? What are their goals in the context of the scenario covered by the IoT prototype? What do they want to achieve? What are their main needs and pain points? Based on these insights, create a persona for your IoT prototype and keep in mind the following question: Does my persona clearly and credibly represent my IoT prototype’s target users?

Templates

Please find below a filled out template for you to get an idea on how to create a persona. We also have provided an empty version of that same template. Please have in mind that you don’t have to use our template! We also want to encourage you to come up with your own approach for sharing details about your persona, if you prefer.
Mrs. Rita Terra
Principal

“I want to inspire tomorrow’s generation with active and green living.”

About
- 10 years as Principal of Elementary School.
- PhD in modern schooling concepts and has published a number of research papers on inspiring young minds.
- As a person who is very conscious of carbon footprint and active living, I want the next generation to be groomed early in life through activities that are akin to playing a game.
- Also a part-time fitness coach.

Responsibilities
- I am responsible for the day-to-day operations of the Healthy Valley Elementary School.
- I am responsible for acting as a bridge between the community and the School Management.
- I am responsible for budget and planning.
- I am responsible for bringing Leadership to the School teachers and administration staffs.

Main Goals
- Through my leadership, I want to inspire everyone in the school and the community towards active & green living.
- Budget and plan the implementation of resource and tools required to achieve my goal.

Needs
- Need a set of tools to be able to monitor the activities of a daily basis of every kind in the school.
- Implement the resources and tools required to achieve the ability to track daily activity
- Install equipment that are integrated into school area that produce power that power the IoT sensor and processors.

Pain Points
- Currently they are manually processing the students’ activity tracker & power generation information.
- Gamification of both physical activity and contribution to power generation
- Inspire students about renewable energy
- Neighborhood participation
Point of View (PoV)
User + need + insight/why

How do Point of View (PoV) statements help you?
Once you have created your persona, you may have found a long list of needs. If you design for all those needs, you’ll end up with an overly complicated solution! We recommend you focus and address each separately, by creating a Point of View (PoV) for each important need of the persona.

Let’s have a look at how to create a Point of View (PoV):
1) Write down the user and his/her need. You will get that information from your filled out persona template.
2) Write down the why/insight associated with the need.

Here are some tips:
Focus on the stories that keep you up at night. If you’re stuck, extract a PoV from your favorite idea. Then go further. Use emphatic language. Don’t design for everyone; choose one need, one insight.

Example:

Point of View

As a [Mother] I need a way to [Personal Goal]
prepare vegetables my children will eat so that their nutritional needs are met. [Why/Insight]
Now try it on your own:

**Point of View**

As a Principal

I need a way to encourage students, set targets for them, monitor their progress and reward achievements

so that they are growing to a better future both for themselves and the world.

...
UX Journey
Describe Actions, Mindset, Feelings and Touch points

Actions
What actions and activities does the Persona take while going through the journey to achieve their goal?

Mindset
What is on the Persona’s mind while taking the actions of their journey?

Feelings
How does the Persona feel each step of the journey? In the template you can color code the different bars. If all 4 bars are colored the persona is super happy, whereas if the persona is upset only one bar is colored.

Touch Points
What touch points does the Persona have? Those can be, for example, tools, channels, devices, conversations, and so on.
<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>ACTIONS</th>
<th>ACTIONS</th>
<th>ACTIONS</th>
<th>ACTIONS</th>
<th>ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal wants data of activity and power generation</td>
<td>Activity and Power Goals are send to the Teachers via email and /or meeting</td>
<td>Teachers encourages student to be active</td>
<td>Weekly meeting between Principal &amp; Teachers</td>
<td>Consolidation of Reports and graphs</td>
<td>Principal's daily announces achievement to inspire students and classes</td>
</tr>
<tr>
<td>Encourage the students to be active</td>
<td>Compile the data manually on to excel sheets</td>
<td>Children are exited but unable to check their own progress</td>
<td>Homogenization of data from all teachers needs to be performed and enforced</td>
<td>The data is already old</td>
<td>The data is already old</td>
</tr>
<tr>
<td>FEELING</td>
<td>FEELING</td>
<td>FEELING</td>
<td>FEELING</td>
<td>FEELING</td>
<td>FEELING</td>
</tr>
<tr>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
</tr>
<tr>
<td>TOUCH POINTS</td>
<td>TOUCH POINTS</td>
<td>TOUCH POINTS</td>
<td>TOUCH POINTS</td>
<td>TOUCH POINTS</td>
<td>TOUCH POINTS</td>
</tr>
<tr>
<td>No metrics</td>
<td>Excel sheets maintained</td>
<td>Data collection to shared excel sheets</td>
<td>Numbers are processed via excel sheets</td>
<td>Reports are circulated in the school</td>
<td>Achievements' are rewarded as different colored ribbons with engravings</td>
</tr>
</tbody>
</table>
Prototype
Prototype screens for an IoT application to solve your PoV

Goal of Prototype Challenge
As part of the Prototype Challenge, you are required to submit a mockup or set of mockups. While the minimum requirement is that you submit only one mockup, it is recommended that you submit at least two mockups so as to illustrate more effectively the user experience (e.g., the first mockup could represent the screen that the user is presented with initially, and the second mockup could illustrate a possible scenario of what happens based on interaction with the first screen).

Mockup Guidelines
Your mockup or set of mockups can be hand-sketched or can be created in other ways (for example, using templates in BUILD). The choice is yours. Hand sketching (drawing) can be an easy way to get started. See [here](https://www.build.me/splash/sites/default/files/SketchPrototype_HowTo%20.pdf) for a quick guide on how to create hand sketches and see [here](https://www.build.me/splash/sites/default/files/Handsketch_template.pdf) for hand sketching templates to get started.

Creating Prototypes with BUILD
In case you decide you want to use the BUILD tool (which is optional) to create your IoT prototype, see [here](https://www.build.me/splash/sites/default/files/BuildIoTPrototype_HowTo%20.pdf) for a step-by-step guide which will help you to get started with BUILD.
The IoT aspect of this project are as follows:

1) Activity sensor are readily available but for this project we want to be able to customize the tracker bands in such a way that the information stored in the band and the communication is restricted to a server specified by the school. This is an important aspect in the security of the data.

2) The power generation kits are also equipped with a NFC chip that enables them to record the kids who are performing the activity on the power generation, there by recording the power generated under their ID.

3) The power generation equipment’s are integrated to school playground and class rooms.