Title – Ops Shop App for Sustainable Future

Science Topic – Innovations: Powering Future Industries
The largest share of huge volume of solid wastes ends up in landfills or on open dump sites, putting enormous pressure on the environment and wildlife habitats.

My topic (Op Shop App for Sustainable Future) explores how students can help reduce the waste by sharing/selling our pre-loved good condition items (recycle or reuse) to others sustainably and reduce hazard to our environment for cleaner future.

Computer Program Details:
"Op Shop for Sustainable Future" App was developed using **App Inventor** – an Online Tool developed by Massachusetts Institute of Technology.

MIT App Inventor is an intuitive, visual programming environment that allows everyone to build fully functional apps for smartphones and tablets.
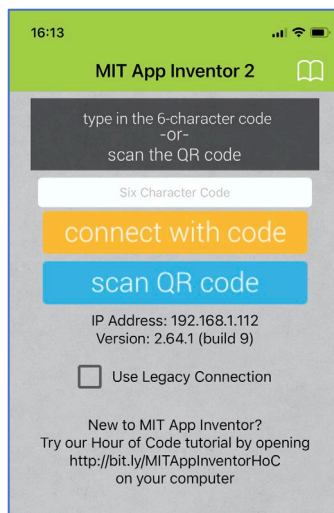
Web Link copy of Program:

Below google drive link has the app program (in .aia format). Please download this file to your computer and follow steps mentions in "Instructions how to run the program.

https://drive.google.com/file/d/17EiQ4TjTUYRsNvgnWx3BriLZbGWjEFjB/view?usp=sharing

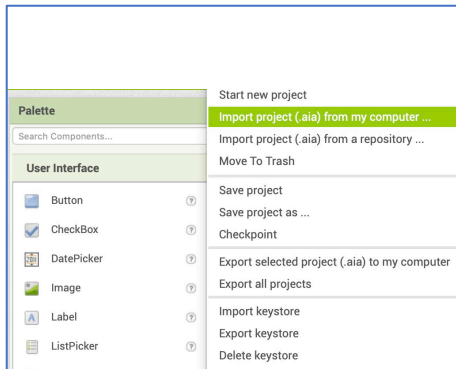**Instructions how to run the program:**
<u>Step-1:</u> Download the application from the link above to your computer.
<u>Step-2:</u> Download "MIT App Inventor 2" app in your Mobile device. Open the App and you could see screen like below.
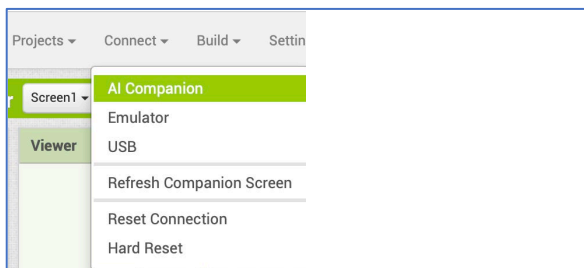

<u>Step-3:</u> Open MIT App Inventor Website (https://appinventor.mit.edu/explore/get-started) and Click on "Create Apps" button on the top of the screen. This will open a new browser Window asking to register with your email. Complete the registration process following the instructions in the screen.
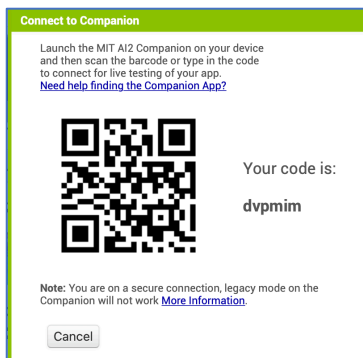
<u>Step-4:</u> Login with your email credentials and select Projects → Import project(.aia) from my computer as shown below. This will load the Op Shop app as project file.

Step-5: Now select Connect and select "AI Companion" as shown below.

This will open a QR code screen as shown below.

Open the "App Inventor" App in your mobile (as shown in step 2 and scan the QR Code). This will open the "Op Shop App".

Now enjoy shopping with "Op Shop App" and kindly encourage other students to reuse/recycle their preloved items to save the environment. Let us RECYCLE, REUSE, REDUCE !!!
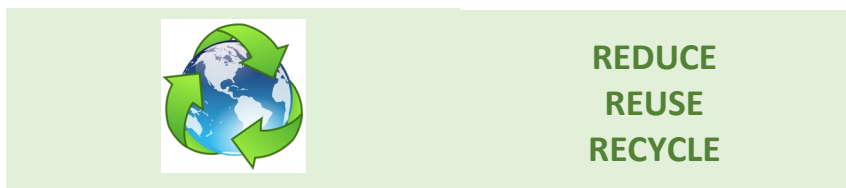
Have you ever wondered how much garbage and rubbish there is on Earth? When disposing of their daily trash, most people do not give any further thought to where it goes and what happens to it.

The largest share of this huge volume ends up in landfills or on open dump sites, putting enormous pressure on the environment and wildlife habitats. Unfortunately, on the whole, people have not yet acknowledged the danger of overconsumption and overproduction.

Despite all the recycling technologies in use, less than 20% of waste is recycled annually, with the remaining 80% becoming part of landfill sites.

Waste generation has increased massively around the world in recent decades, and there are no signs of it slowing down. By 2050, worldwide municipal solid waste generation is expected to have increased by roughly 70 percent to 3.4 billion metric tons.

REDUCE
REUSE
RECYCLE

Buying pre-loved items benefits the environment by Recycling, Reusing and Reducing waste. It also helps to save money and helps support the good work of local businesses and charities!

Each time you purchase something from a second hand store or op shop, more items are kept out of landfill. Buying second hand also extends the life of common household items such as clothing and books, which can be environmentally costly to make. It takes 2,700 litres of water to make one cotton T-shirt, that's enough for one person to drink for 900 days! Textiles can take up to 200+ years to decompose in landfills.

This Op Shop App helps students to publish pre-loved, good condition uniforms, clothing, stationary, books etc for other students to buy.

So why not stop by our online local Op shop the next time you're looking for your next pair of jeans or the perfect stationery to suit your style … you might be pleasantly surprised at what you find!

What does the user do? Where do they start and where do they finish?

The users first need to sign-up and then login to the app. There are two options the user can select – Sell (to sell their pre-loved items) or Buy (from list of items).

Sell - When the user selects Sell, this will ask for more information about the product/item and the seller. Once the seller submits the item for selling, an email will be triggered to the App Administrator and the seller. The App Administrator wil review the product/item before publishing it for Buying.

Buy – User after successful login can browse through the items and add the items they want to buy. When they click Buy Now button, this will send email to the App Administrator, the buyer, and the seller. Once the item is sold, the seller will confirm this in an email to App Administrator and this will be removed from the list.

Bibliography

1. World Waste: Statistics by Country and short facts (By Daniil Filipenco)
   (Updated on 07/03/2023)
   https://www.developmentaid.org/news-stream/post/158158/world-waste-statistics-by-country#:~:text=Short%20facts%20about%20the%20global,(a%2070%25%20increase).
   (Accessed 21/07/2023 21:05)

2. Global Waste Generation: Statistics and Facts (By Bruna Alves)
   (Updated on 14/07/2023)
   https://www.statista.com/topics/4983/waste-generation-worldwide/#topicOverview
   (Accessed 21/07/2023 21:10)

3. The Environmental Crisis caused by Textile waste (By Rachel Brown)
   (Updated on 08/01/2021)
   https://www.roadrunnerwm.com/blog/textile-waste-environmental-crisis#:~:text=And%20when%20consumers%20throw%20away,the%20groundwater%20and%20our%20soil.
   (Accessed 21/07/2023 21:30)

Acknowledgement

Special thanks to my mum, Vanitha for guiding me with the app development.