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Cyclo Application

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***Abstract*—Every day, 364,000 bicycles are made and 47,670 are sold. Bicycles are created at double the pace of cars. Every year, it is estimated that around 15 million bicycles are dumped by their owners. This had led to many discarded bikes wind up in landfills (Ruiz, 2020). To deal with this issue, we have come up with an application called Cyclo. It is a bicycle rentalapp which acts as a transportation medium for tourist and non-tourist to stroll around the city especially to the local tourist attraction and they can also stop-by at the hawkers to enjoy local street foods which also helps boost the local economy. The objectives of Cyclo are 1) to assist local small and medium-sized enterprises (SME) boosts their income by renting their bicycle (bicycle owners or personal), 2) to reduce the bicycle trivial landfill (over-supplies and unused bicycle), and 3) to promotes sustainable tourism among tourist and non-tourist. The novelties of Cyclo are to promotes small and medium-sized enterprises (SME), minimize the number of unused bicycles, and promotes sustainable tourismamong tourist and non-tourist. This application brings an impact on 1) economy, it helps the local small and medium- sized enterprises (SME) will gain more income, 2) social, it will educate the tourist and non-tourist on local tourist attractions and local cuisines, and 3) environment, it will reduce the land pollution and carbon footprints. Lastly, the potential commercialization can be seen in the global bike sharing market was valued at $3.43 billion in 2019 and is expected to reach $6.98 billion by 2027, growing at a 14.0% CAGR between 2020 and 2027. From here, we can acknowledge that the global bike sharing market are increasing year-by-year as the usage of smartphones and applications for travelling is proceeding.**

Keywords—bicycle, tourist, rental service, attractions, cuisines

I. INTRODUCTION

Bicycles may look like just a small and compact transportation. However, being small and cheap also come with expensive price. Bicycles are created faster than the pace of cars as it is easy to make. Due to that, bicycle or bike waste also become a major issue globally. Each year, there were at least 15 million bikes wasted by their owners including shops. This has caused the bicycle becomes a landfill of its kind where they were collected and piled up becoming waste. With that, bicycle waste is also a significant issue which must be addressed as globally. To deal with this issue, we have come up with an application called Cyclo. It is a bicycle rental application which acts as transportation medium for tourist and non-tourist to stroll around the city especially to the local tourist attraction and at the same time they can stop-by at the hawkers to enjoy local street foods which also helps boost the local economy.

II. OBJECTIVES

i. To assist local small and medium-sized enterprises (SME) boosts their income by renting their bicycle (bicycle owners or personal).

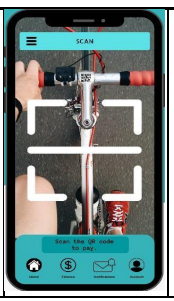
ii. To reduce the bicycle trivial landfill (over-supplies and unused bicycles).

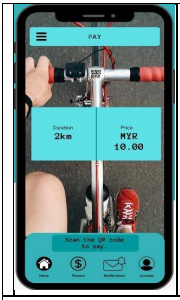
iii. To promotes sustainable tourism among tourist and non-tourist.

III. METHODS

Cyclo Application is a bike renting app that acts as a transportation medium for tourists and non-tourist to stroll around the city especially to the local tourist attraction and they can also stop-by at the hawkers to enjoy local street foods which also helps boost the local economy. The table below shows the interface design of Cyclo Application.

Table 1. Interface Design of Cyclo Application

Interface Design	Description	Interface Design	Description
Step 1	Install Cyclo Application on Google Play (Android) or App Store (iOS).	Step 2	Register your name, email address and password.
Step 3	Choose and click the red icon to book your bike at the designated location.	Step 4 (i)	Upon arrival at the location, scan the QR code or enter the code on the bike.
 Step 4 (ii)	Upon arrival at the location, scan the QR code or enter the code on the bike.	Step 5	Pay your rental bike through E-wallet.

 Step 6	E-receipt will be shown after payment.	 Step 7	Choose and click the orange location to get to the location
 Step 8	After using the bike, please return it back to designated location.	 Step 9	Thank you for using our service.

IV. CONCLUSIONS

In conclusion, as smartphones and travel apps become more popular, the worldwide bike-sharing sector is growing year after year. Therefore, creating this Cyclo Application will assist local small and medium-sized enterprises (SME) boosts their income by renting their bicycles (bicycle owners or personal bicycle), reduce the bicycle trivial landfill, and able to promotes sustainable tourism among tourist and non-tourist. Hence, Cyclo Application still more trials are required in the future to achieve a better outcome on this matter.

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