

Silver Plus

- **Team Members (Group 09-08)**

- Ian Poon (2P3) (Team Leader, main coder)
- Fu LingYu (2P3) (html frontend)
- Evan Poh (2O1) (research and analysis)
- Hu Yucheng (2P3) (html frontend, scribe for Q&A session)

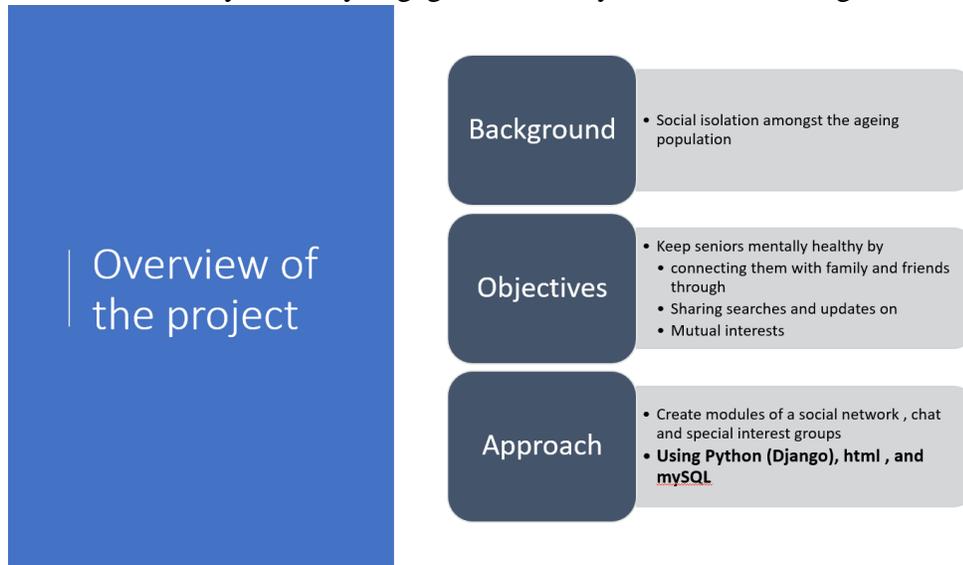
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An Introduction to our Project

- The project is a social media platform targeted at the elderly to help them connect with family and friends, keeping them mentally healthy.
- With the decline of mental faculties with age, the elderly often face social isolation which will in turn, worsen their mental decline. We plan to use our project to combat these issues.
- The focus of our project would be on the elderly, the group of people most vulnerable to mental decline. With feedback and testing with the elderly and their loved ones, we plan to

- create a platform for the elderly to reach out and connect with their families and friends on mutual interests.
- Leveraging the same platform, we would also create an interactive game to keep the elderly mentally engaged when they are not interacting with their social network



Literature Review

- The problem of elderly loneliness is very prevalent in modern Singapore. Singapore is one of the most rapidly aging countries in Asia. The proportion of older adults (aged 60 years and over) in the population, currently about 8%, is projected to increase to 19% by 2030. (Duke Global Health Institute 2017)
- The problem is so grim that Agingcare.com called it an ‘epidemic’ (Agingcare.com May 2018). A key cause of this loneliness is social isolation. Our project plans to connect elderly with family and friends to combat social isolation, making the project relevant and powerful in this day and age.
- A case study by SCIE(2012), states that ‘Older people are particularly vulnerable to social isolation and loneliness owing to loss of friends and family, mobility or income.’ This validates our project’s target audience of the elderly.
- Another case study by Archana Singh and Nishi Misra (2009), informs “The elderly population is large in general and growing due to advancement of health care education. These people are faced with numerous physical, psychological and social role changes that challenge their sense of self and capacity to live happily.” The challenges ageing population in Singapore faces shows how our project would be relevant in helping in today’s society.

The study and methodology

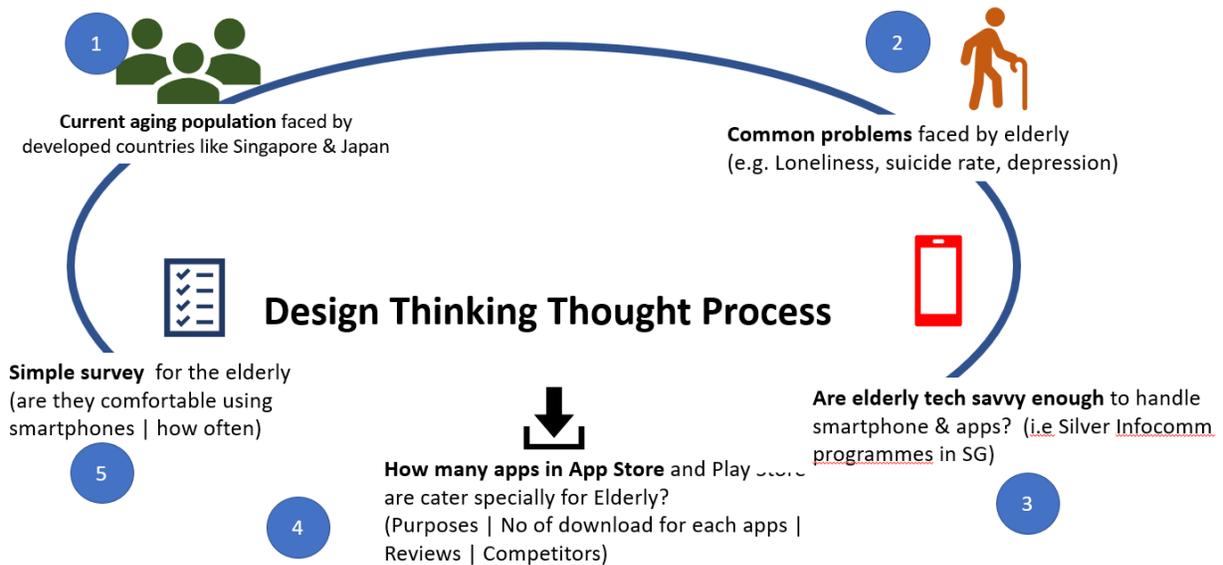
Market research- review of current social media platform

- We reviewed the existing social media to
 - a. Understand their suitability to the elderly in Singapore
 - b. Establish if there are any gaps which our proposed solution can address.

- We found that while there are many established platforms like Facebook and Instagram, none of which catered specifically to the needs and also skillsets level of the local elderly population.

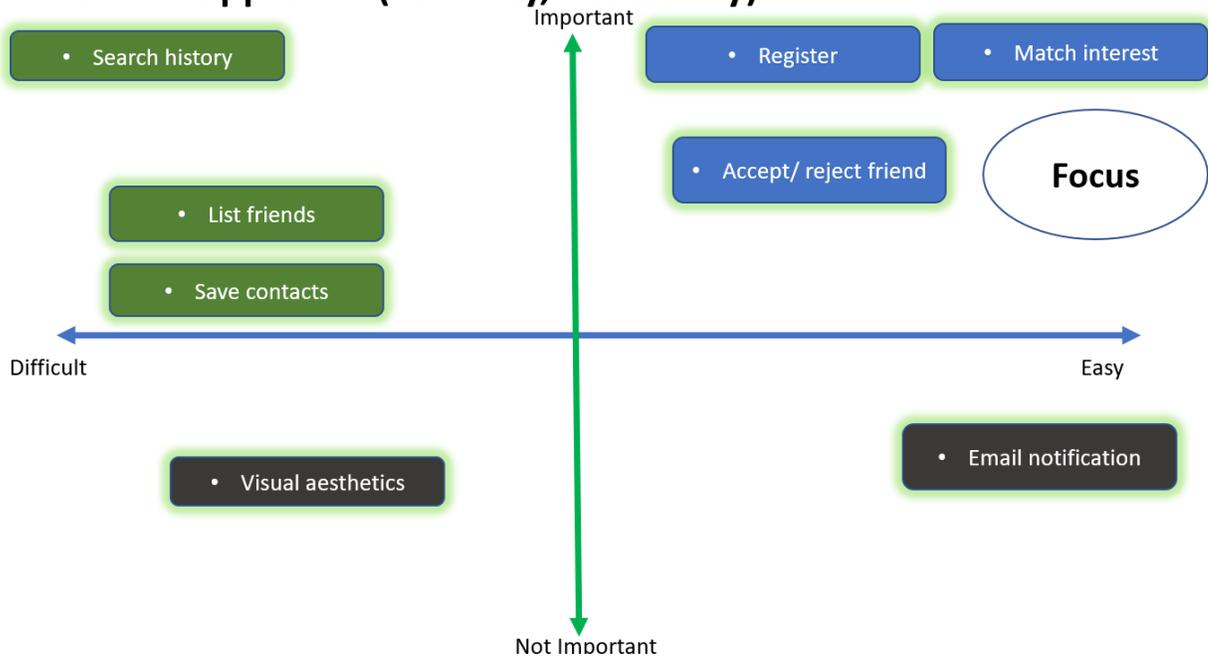
Methodology- Design Thinking Process

- We planned with the end objective (help connect the elderly with family and friends, keeping them mentally healthy) in mind
- In order to achieve the stated goals, we adopted the following design thinking process



- We also weigh the feasibility of each feature

Modular approach (usability, feasibility)



- Based on this, we created modules of a social network with the following features
 - a. chat and special interest groups
 - b. interactive game
- **These are built using Python (Django), html , and mySQL**

Role distribution:

Teammates	Roles	Remarks
Ian	Group leader, Python coder	Python is the logic behind the web app
Ling Yu	Html coder	Aesthetics and front end
Yu Cheng	Html and database coder	Database store user information needed
Evan	Director of business analytics and slide editor	Collects information about competitors and key, relevant features

Outcomes, Analysis and Discussions.

We successfully created a system that automated the following process flow

- Onboarding the seniors
- Searching and connecting with family and friends
- Searching on common interests, creating and sharing updates (Engaging family and friends)
- Interactive game to stimulate the mind (when not interacting with family and friends)

Sample codes and user interface

Here are the samples of the code and user interface for the four main steps

Process 1- Onboarding the senior



```

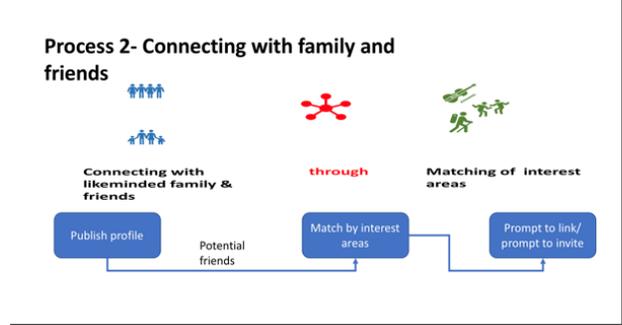
admin.py      8
apps.py      9 @login_required
forms.py     10 def index(request):
models.py    11     return render(req
tests.py     12
urls.py      13
views.py     14 def users(request):
chat         15     form = NewUserPro
friends      16     if request.method
ProTwo       17         form = NewUse
__pycache__ 18
__init__.py 19     if form.is_va
settings.py  20         form.save
urls.py      21         return in
wsgi.py      22
static       23
templates    24     else:
appTwo       25         print('er
base.html    26         return render(req
index.html   27
login.html   28
29 def userss(request):
30
31     user_list = UserP

```

Process 1- Onboarding the senior



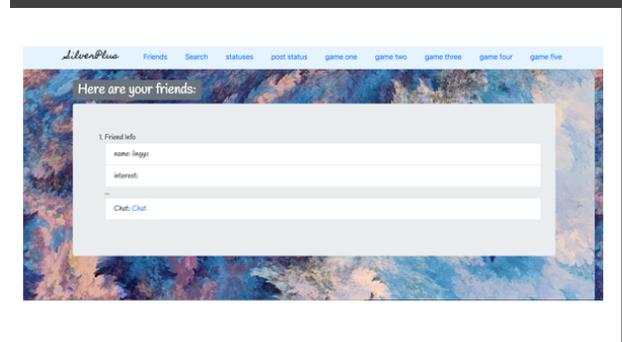
Process 2- Connecting with family and friends



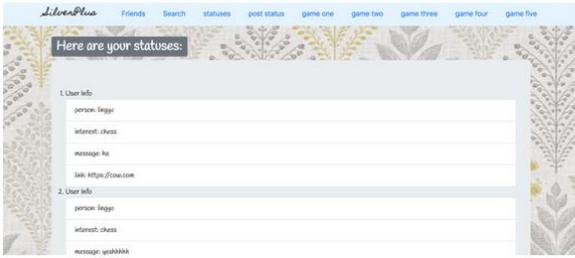
```

__init__.py 11 @login_required
admin.py     12 def list_friends(request):
apps.py      13     friends_queryset = FriendRequest.objects.fi
forms.py     14
models.py    15     friend_list = []
tests.py     16     for friend in friends_queryset:
urls.py      17         if friend.sender_id == request.user.id:
views.py     18             friend.friend = User.objects.get(pk=
chat         19             else:
friends       20                 friend.friend = User.objects.get(pk=
__pycache__ 21                 friend_list.append(friend)
migrations   22
__init__.py 23
admin.py     24
apps.py      25
models.py    26 def search_friends(request):
tests.py     27     user_profiles_queryset = request.user.profil
urls.py      28     interests = [ profile.interest for profile i
views.py     29     users_queryset = UserProfile.objects.filter(
ProTwo       30     user_id = { user.id for user in users_querys
__pycache__ 31     user_id = list(user_id)
__init__.py 32     users_queryset = User.objects.filter(pk_in=
settings.py  33
34     return render(request, 'friends/searchfriend
35
36

```



Process 3- Engaging family and friends

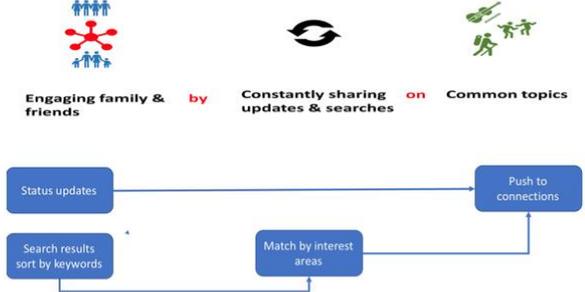


```

1 from django.contrib.auth.models import User
2 from django.db import models
3
4
5 # Create your models here.
6 class UserProfile(models.Model):
7     interest = models.CharField(max_length=128)
8     message = models.CharField(max_length=128)
9     link = models.URLField(max_length=254, blank
10    user = models.ForeignKey(User, on_delete=mod

```

Process 3- Engaging family and friends



Process 4- Interactive Game

Process 4-keeping
elderlies' minds active
through:

- 1)games
- 2)social media sharing

Welcome to Connect Four!

The game is to connect four of your chips

Please pick a column to drop your blue chip

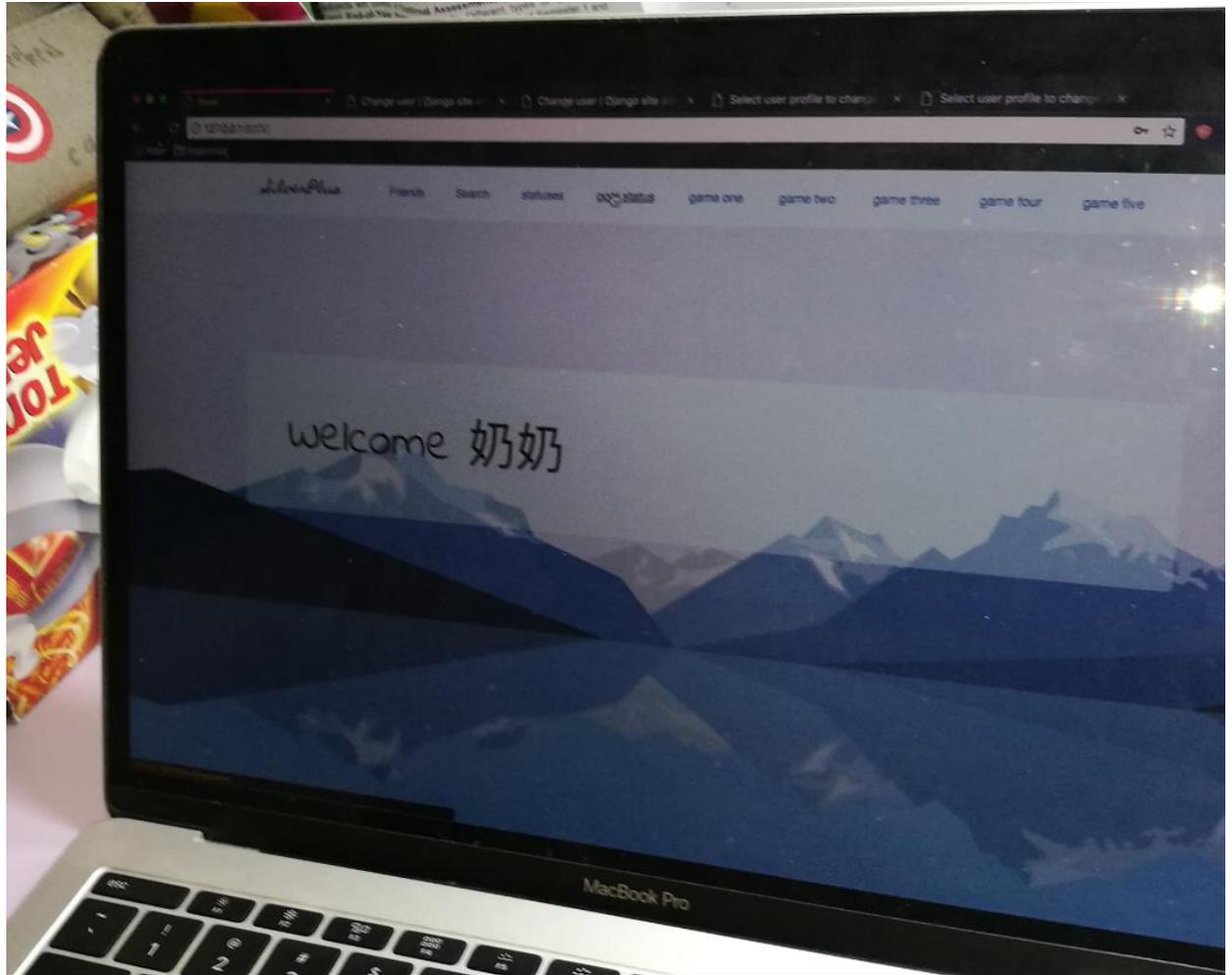
Testing the system with the elderly/ focus group

- We tested the system with a focus group of test users.
- These test users consisted of elderly and also younger participants

- The reason for also including younger participants were
 - a. One of the stated objectives was to enable to connect with their family (including younger grandchildren)
 - b. The system must then be interesting and friendly enough to attract both the elderly (the main target) and the young (their family members)

The results

- The focus group found
 - a. **(User interface)** Compared to Facebook, the user interface simpler to navigate



- b. **(Connecting with friends)** Easy to connect with family on topics that are familiar to local population (eg eating, watching Channel 8)
- c. **(Other possible usage)** The younger members of the focus group also remarked that it is a good alternative to online games, which are hard to share with older folks)

Implications and Recommendations

Local platform for local population

- While the biggest social media platform, Facebook has 2.26billion users worldwide, the number in Singapore is 3.16million, with only 340,000 of these over 55 years (Facebook statistics 2017).
- There were no further breakdown of how many of these 340,000 users were truly elderly (65years and above) but anecdotal findings and literature suggested that the usage was low (Today Newspaper 28 July 2017)
- Steep learning curve and the weak command of English were possible reasons. By having a system that focus on simple navigation and local content over features for “digital natives”, there is a better chance of acceptance amongst elderly in Singapore.

Social media for interaction, not isolation

- Social media and online games were widely blamed to reduce interaction between family members as players (usually younger ones) became too obsessed.
- However, the feedback from the younger members of the focus group gave us hope that, given the right content (such as gamification and common interests), social media platform can promote interaction between the elderly and the younger generation

Recommendations

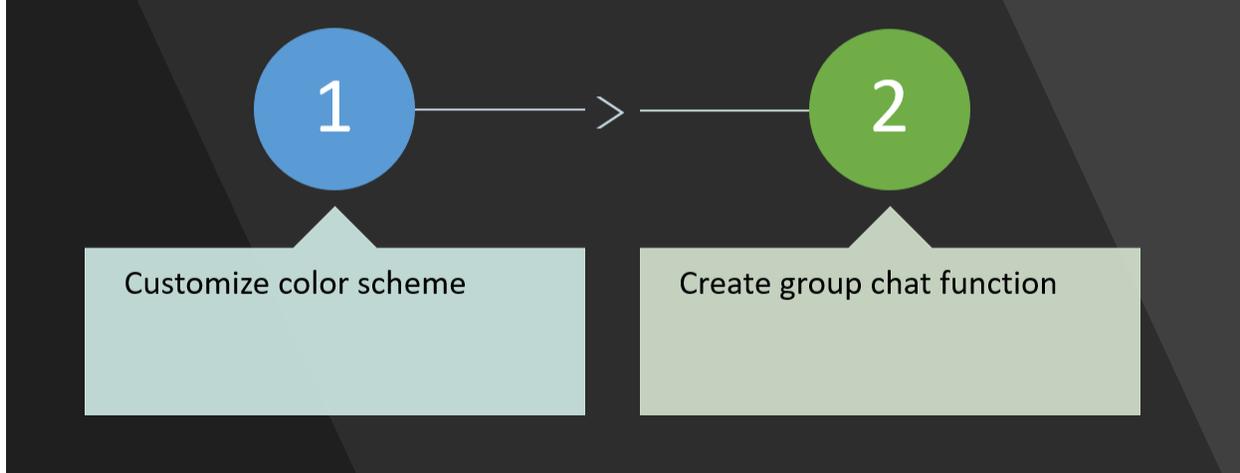
Case of local social media

- The findings of this project points to a strong case for organizations with more resources (such as social services organizations, religious communities and the government) to look at developing a social media platform that caters to
 - a. Local tastes and interests
 - b. Local capabilities (IT and language)

Further enhancements

- While happy with the system, the focus group also suggested the following as possible enhancements:

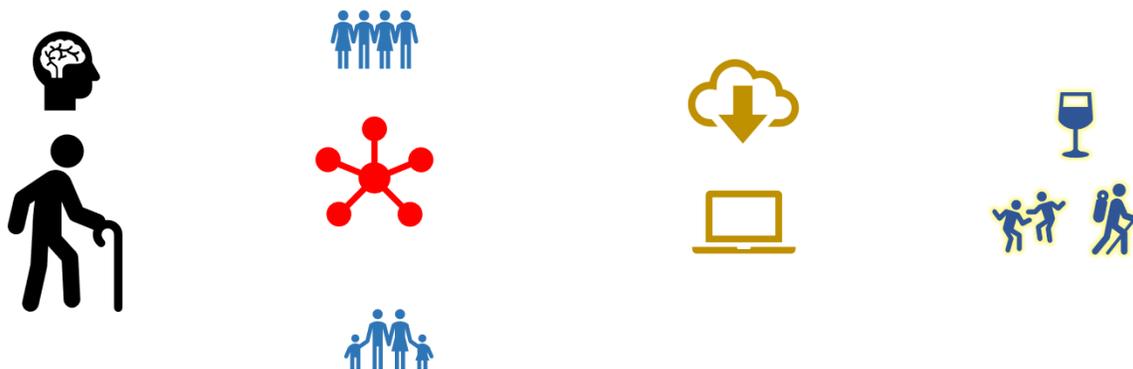
Future Enhancements



Conclusion

- The project has addressed the objectives listed above and also in the diagram below:

Project Objectives



Keeping the seniors mentally healthy

by

Connecting them with family & friends

through

Sharing searches & updates

on

Mutual interests

- This has been an exciting project that stretched the project team in the following aspects
 - a. Learning to plan with the end in mind
 - b. Weighing what were desirable and what were feasible
 - c. Coding skillsets (Django, MySQL, HTML !!!)
- This project has the potential of expanding from here. Given the “silver tsunami” Singapore is going to face, this project is well worth pursuing.

Bibliography

References

- Archana Singh and Nishi Misra 2009 “*Loneliness, depression and sociability in old age*” Industrial Psychiatry Journal Jan-Jun; 18(1): 51–55.
- Anne-Marie Botek 5 Mar 2018 “*Combatting the Epidemic of Loneliness in Seniors*” retrieved from www.Agingcare.com
- “*Aging and Social Isolation in Singapore: a community survey*” 2017 Retrieved from <https://globalhealth.duke.edu/projects/aging-and-social-isolation-singapore-community-survey>
- “*At a glance 60: Preventing loneliness and social isolation among older people*” 2012 Retrieved from www.scie.org.uk/publications/ataglance/ataglance60.asp
- Toh Ee Ming 28 July 2017 “*Feeling lost in a digital world*” Today Newspaper 28

Links and resources

- Github royalty/copyright-free wallpaper repository
 - a. <https://gist.github.com/brettlangdon/85942af486eb79118467>
- Django
 - a. <https://www.djangoproject.com/>
- Googlefonts
 - a. <https://fonts.google.com/>
- Bootstrap 4
 - a. <https://stackpath.bootstrapcdn.com/bootstrap/4.1.1/css/bootstrap.min.css>