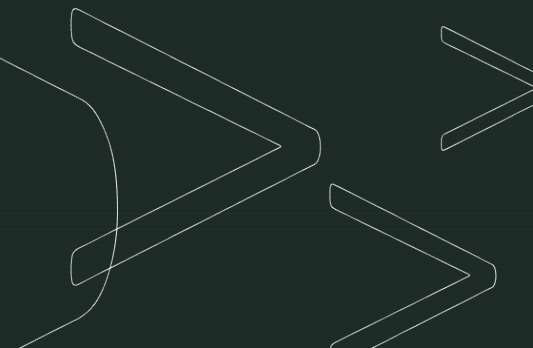


# Data Structures And Algorithms

Aman Raj

B.Tech (CSE)

12101946





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  - I will discuss my summer training MOOC
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# Overview Of Course Data Structures And Algorithms

“Data Structures and Algorithms” is an online self paced course offered by “GeeksForGeeks” consisting of all the topics needed to learn about DSA and five mini projects using the concepts of DSA. This course teaches the essential skills for working with data structures and algorithms.

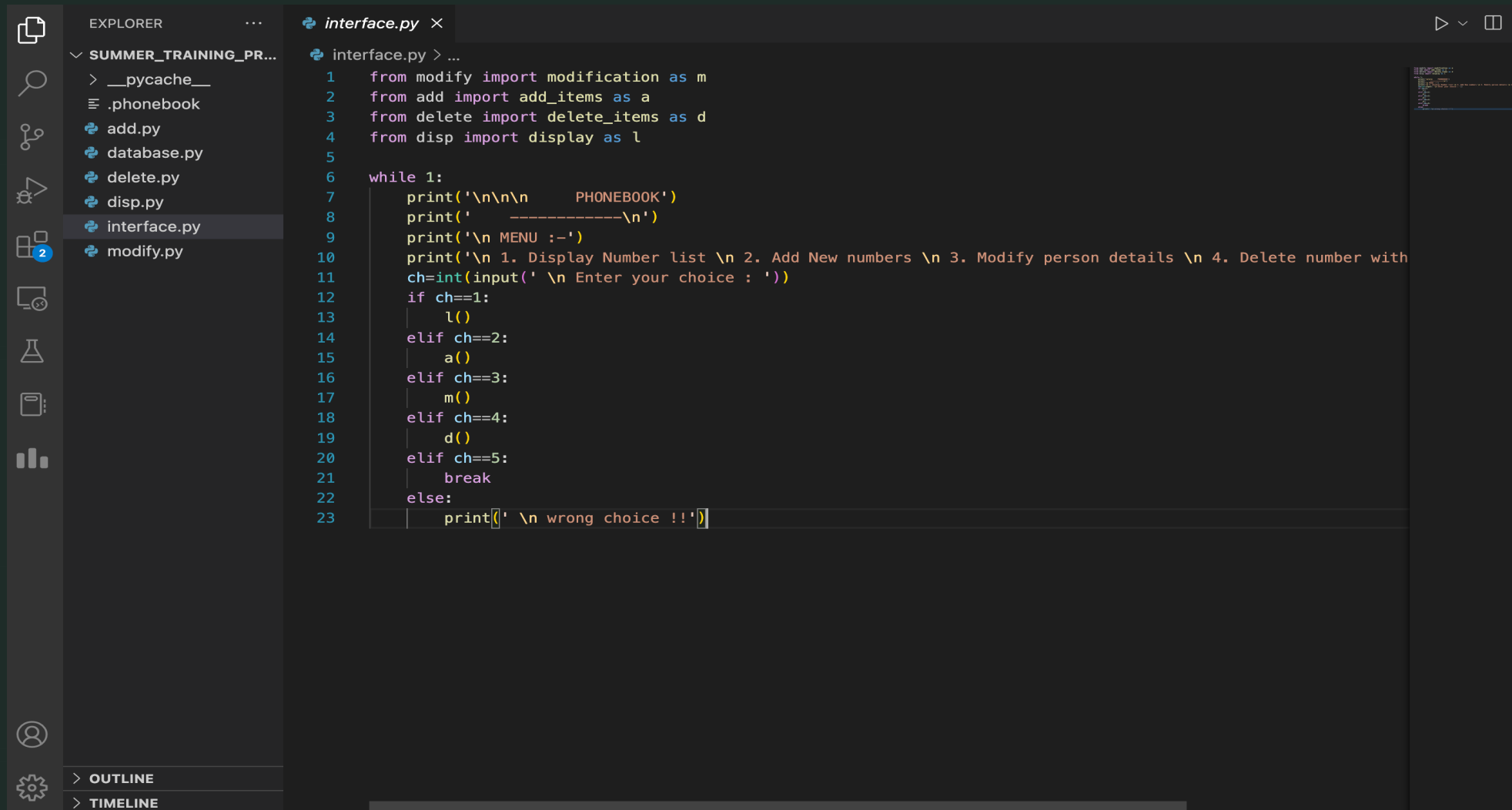


# Project :- PhoneBook Directory using Python

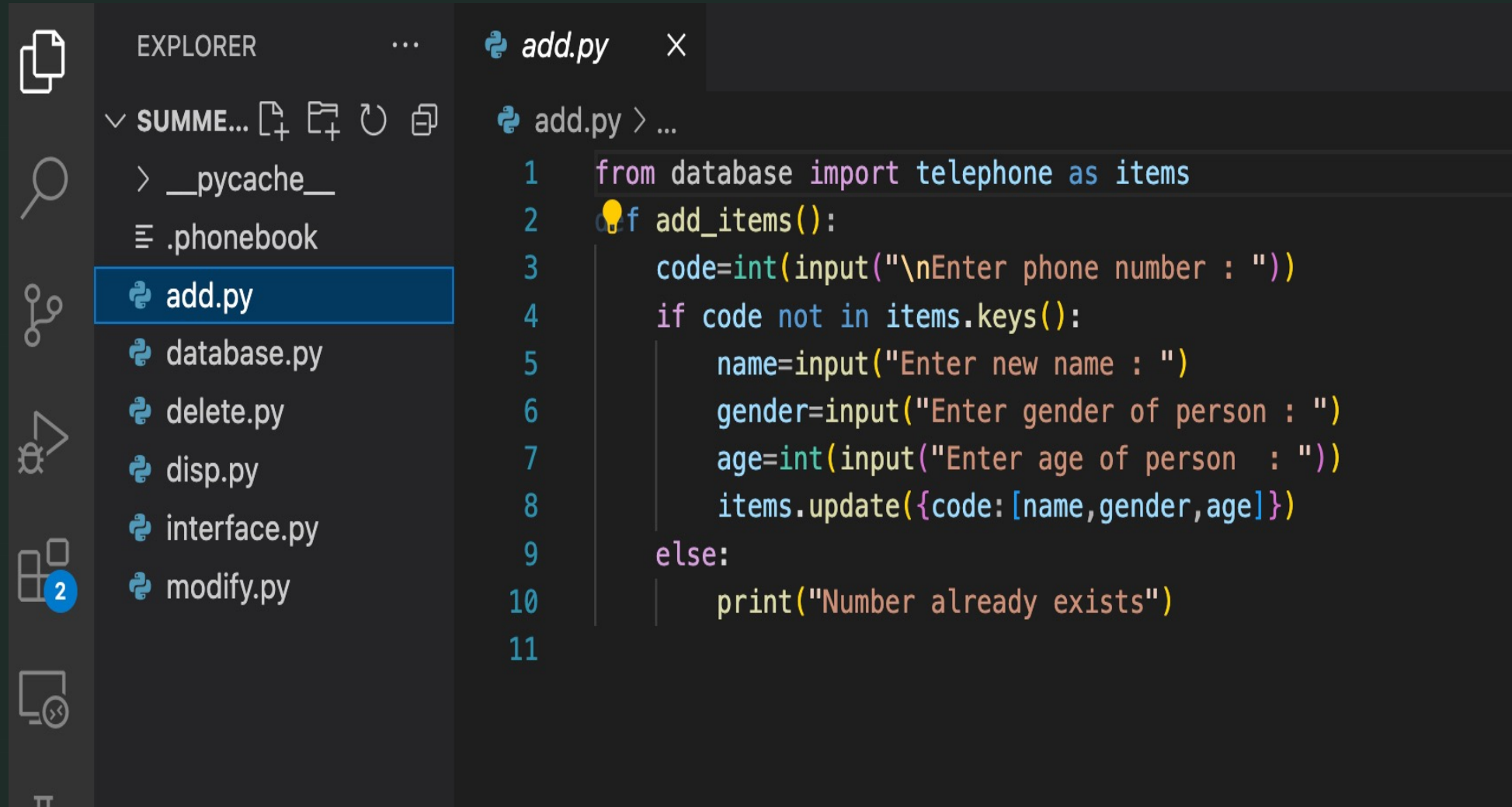
# Project Overview

I made a Phonebook Directory using python with the concept of Array , Function , Loops concept , Conditional Statement, Dictionary , Import statement. The Phonebook management have three main operations Searching, Sorting and Deleting. These three operations can be performed efficiently with Linked List.





Project Screenshots



The screenshot displays a code editor interface. On the left, the 'EXPLORER' sidebar shows a project structure with a folder 'SUMME...' and files including '\_\_pycache\_\_', '.phonebook', 'add.py' (highlighted), 'database.py', 'delete.py', 'disp.py', 'interface.py', and 'modify.py'. The main editor window shows the code for 'add.py'.

```
1 from database import telephone as items
2 def add_items():
3     code=int(input("\nEnter phone number : "))
4     if code not in items.keys():
5         name=input("Enter new name : ")
6         gender=input("Enter gender of person : ")
7         age=int(input("Enter age of person : "))
8         items.update({code: [name,gender,age]})
9     else:
10        print("Number already exists")
11
```

Project Screenshots

```
delete.py X
delete.py > delete_items
1 def delete_items():
2     from database import telephone as pl
3     while 1:
4         value=int(input('Enter telephone number:'))
5         if value in pl.keys():
6             print( 'Name of the person : {} \ngender of person : {} \nage of the person : {}'.format(pl[value]['name'], pl[value]['gender'], pl[value]['age']))
7             ch=input(' Confirm delete? (yes/no): ')
8             if ch=='yes':
9                 del pl[value]
10            else:
11                print(' Number not deleted')
12        else:
13            print('\n Number does not exist')
14        choice=input(' Do you want to delete more items? (yes/no): ')
15        if choice!='yes':
16            break
```

Project Screenshots



```
disp.py  modify.py X
modify.py > modification
1  def modification():
2      from database import telephone as pl
3      item=int(input(' Enter the phone number :'))
4      if item not in pl:
5          print('\n Number does not exist ')
6      else:
7          print(' Existing Number :\n name of the person : {}\n gender of person  : {}\n age of the person : {}'.
8              pl[item][0]=(input('Enter the new  name :'))
9              pl[item][1]=(input('Enter gender of person :'))
10             pl[item][2]=int(input('Enter age of person :'))
11             print('Modified details are:\n', pl[item])
```


Project Screenshots

```
EXPLORER  ...  disp.py  X  delete.py

v SUMME...  [+][-][↺][↻]
  > __pycache__
  ≡ .phonebook
  📄 add.py
  📄 database.py
  📄 delete.py
  📄 disp.py
  📄 interface.py
  📄 modify.py

📄 disp.py > ...
1  from database import telephone as pl
2  def display():
3      print( 'Number'.ljust(6), ' \t'  'Name'.ljust(18),      'gender',      ' age')
4      for key in pl.keys():
5          print ( ' {}  {} {} {}'.format(key,pl[key][0].ljust(20),pl[key][1], pl[key][2]))
6
7
```

Project Screenshots



The main aim was to implement all the knowledge and skills gained in summer training on a real project.

# Why This Project

- **Practical Implementation**
  - I did this project to get practical exposure of the concepts of DSA.
- **Learning**
  - I learned a lot from this project and revised all the learnings from my summer training.
- **Explore**
  - I got the opportunity to explore more about this domain, learn new things and enhance existing skills.
- **Solve Issues**
  - I learned how to work with Data Structures and Algorithms

# Learning Outcome

Skills and technologies learned from the summer training and experience gained from working on real projects.

- Implementation of DSA in real life projects
- Working with Python

# Conclusion

The conclusion we have reached is that the Data structure and algorithm play very important role in any real time projects .





THANK YOU