```python
import json
import random
import time

title = """
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================================================================================
"""


def load_accounts():
    try:
        with open("accounts.json", "r") as file:
            return json.load(file)
    except FileNotFoundError:
        return {}


def save_accounts(accounts):
    with open("accounts.json", "w") as file:
        json.dump(accounts, file, indent=2)


def open_account():
    accounts = load_accounts()

    print("Hello! This is account management section.\nYou will get an interest rate of 2.70% on your savings account.")
    boolean = input("Do you still want to continue (y/n) : ")
    if boolean.lower() == "y":
        boolean = True
    elif boolean.lower() == "n":
        boolean = False
    else:
        boolean = False

    if boolean:
        name = input("Enter account holder's name: ")

        group = input("Are you individidual or HUF (Hindu United Family) : ")
        if group.lower() == "individual":
            group = group
        elif group.lower() == "huf":
            group = "HUF"
        else:
            group = "Unknown"
        while True:
            date_of_birth = input("Enter your Date of Birth (DD/MM/YYYY) : ")
            try:
                if len(date_of_birth) >= 5:
                    if date_of_birth[2] == '/' and date_of_birth[5] == '/':
                        break
                    else:
                        raise ValueError
                else:
                    raise ValueError
            except:
                pass
            print("Please enter in format DDD/MM/YYYY...")

        gender = input("What's your gender (M/F/T) : ")
        if gender.lower() == 'm':
            gender = "Male"
        elif gender.lower() == 'f':
            gender = "Female"
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        elif gender.lower() == 't':
            gender = "Transgender"
        else:
            gender = "Unknown"

        status = input("Enter your Status (Minor/Adult) : ")
        if status.lower() == 'minor' or status.lower() == 'm':
            mother_name = input("Enter your Mother's Name : ")
            father_name = input("Enter your Father's Name : ")
            married_status = None
        elif status.lower() == 'adult' or status.lower() == 'a':
            mother_name = None
            father_name = None
            married_status = input("Enter your married status (Married/Unmarried) : ")
        else:
            mother_name = None
            father_name = None
            married_status = None

        nationality = input("Enter your nationality : ")

        while True:
            pan_number = input("Enter your Pan number : ")
            try:
                pan_number = int(pan_number)
                break
            except:
                pass
            print("Please enter an integer...")

        while True:
            aadhar_number = input("Enter your Aadhar number : ")
            try:
                aadhar_number = int(aadhar_number)
                break
            except:
                pass
            print("Please enter an integer...")

        address = input("Enter your Address : ")

        while True:
            pin_code = input("Enter your Pin Code : ")
            try:
                pin_code = int(pin_code)
                break
            except:
                pass
            print("Please enter an integer...")

        while True:
            mobile_number = input("Enter your Mobile number : ")
            try:
                mobile_number = int(mobile_number)
                break
            except:
                pass
            print("Please enter an integer...")

        email = input("Enter your Email address : ")

        security_ques = input("Enter your security question : ")

        security_ans = input("Enter your security answer : ")

        while True:
            balance = input("How much you want to deposit now : ₹")
            try:
                balance = float(balance)
                break
            except:
                pass
            print("please enter a valid amount...")

```

```
148         print("Please accept the following declaration")
149         print("I hereby acknowledge that I have received and read the terms and conditions, agree to comply
    with the "
150               "policies set forth by The Bank, and confirm that the information provided is accurate to the
    best of my "
151               "knowledge.")
152         accepted = input("Do you accept the above declaration (y/n) : ")
153         if accepted.lower() == "y":
154             accepted = True
155         elif accepted.lower() == "n":
156             accepted = False
157         else:
158             accepted = False
159 
160         if accepted:
161             account_number = random.randint(100000000000, 999999999999)
162             if account_number in accounts:
163                 return
164 
165             pin = random.randint(1000, 9999)
166 
167             accounts[account_number] = {
168                 "Name": name.capitalize(),
169                 "PIN": pin,
170                 "Group": group.capitalize(),
171                 "Date of Birth": date_of_birth,
172                 "Gender": gender,
173                 "Status": status,
174                 "Mother's name": mother_name,
175                 "Father's name": father_name,
176                 "Married Status": married_status,
177                 "Nationality": nationality.capitalize(),
178                 "PAN Number": pan_number,
179                 "Aadhar Number": aadhar_number,
180                 "Address": address,
181                 "Pin Code": pin_code,
182                 "Mobile Number": mobile_number,
183                 "Email Address": email,
184                 "Security Question": security_ques,
185                 "Security Answer": security_ans,
186                 "Balance": balance
187             }
188             save_accounts(accounts)
189 
190             print("Just give us a second...")
191             time.sleep(3)
192 
193             print(f'''
194     Dear {name.capitalize()},
195 
196     Congratulations! Your account with The Swiss Bank has been successfully opened. Here are your essential
    details:
197 
198     Account Number: {account_number}
199     4-Digit PIN: {pin}
200     Please remember to keep this information confidential for your security. If you have any questions or need
    assistance, feel free to reach out.
201 
202     Thank you for choosing us. We look forward to serving you!
203 
204     Best regards,
205 
206     Bank Account Management
207     The Swiss Bank
208     ''')
209         else:
210             main()
211 
212     else:
213         main()
214 
215 
216 def deposit_money():
217     accounts = load_accounts()
```

```
218
219     while True:
220         account_number = input("Enter account number (or q to quit) : ")
221         try:
222             if account_number.lower() == 'q':
223                 main()
224                 break
225             elif account_number in accounts:
226                 break
227             else:
228                 raise ValueError
229         except:
230             pass
231         print("Please enter correct account number...")
232
233     if account_number.lower() == 'q':
234         main()
235     else:
236         pass
237
238     while True:
239         amount = input("Enter the amount to deposit: ₹")
240         try:
241             amount = float(amount)
242             break
243         except:
244             pass
245         print("Enter a valid amount...")
246
247     while True:
248         check_pin = input("Enter Your Pin : ")
249         try:
250             check_pin = int(check_pin)
251             break
252         except:
253             pass
254         print("Please enter a valid input...")
255
256     if check_pin == accounts[account_number]['PIN']:
257         print("Just give us a second...")
258         time.sleep(2)
259
260         accounts[account_number]["Balance"] += amount
261         save_accounts(accounts)
262
263         print(f"Deposited ₹{amount} successfully. New balance: ₹{accounts[account_number]['Balance']}")
264
265         main()
266     else:
267         print("The PIN entered is not correct.")
268         main()
269
270
271 def withdraw_money():
272     accounts = load_accounts()
273
274     while True:
275         account_number = input("Enter account number (or q to quit) : ")
276         try:
277             if account_number.lower() == 'q':
278                 main()
279                 break
280             elif account_number in accounts:
281                 break
282             else:
283                 raise ValueError
284         except:
285             pass
286         print("Please enter correct account number...")
287
288     if account_number.lower() == 'q':
289         main()
290     else:
291         pass
```

```
292
293     while True:
294         amount = input("Enter the amount to withdraw: ₹")
295         try:
296             amount = float(amount)
297             break
298         except:
299             pass
300         print("Enter a valid amount...")
301
302     while True:
303         check_pin = input("Enter Your PIN : ")
304         try:
305             check_pin = int(check_pin)
306             break
307         except:
308             pass
309         print("Please enter a valid input...")
310
311     if check_pin == accounts[account_number]["PIN"]:
312         if accounts[account_number]['Balance'] - amount > 200.0:
313             print("Just give us a second...")
314             time.sleep(2)
315             accounts[account_number]["Balance"] -= amount
316             save_accounts(accounts)
317             print(f"Withdrew ₹{amount} successfully. New balance: ₹{accounts[account_number]['Balance']}")
318             main()
319         else:
320             print("Just give us a second...")
321             time.sleep(2)
322             print("I'm sorry, but you can't withdraw that much money since it won't maintain the minimum
    balance(₹200).")
323             main()
324     else:
325         print("The Pin entered is not correct.")
326         main()
327
328
329 def check_balance():
330     accounts = load_accounts()
331
332     while True:
333         account_number = input("Enter account number (or q to quit) : ")
334         try:
335             if account_number.lower() == 'q':
336                 main()
337                 break
338             elif account_number in accounts:
339                 break
340             else:
341                 raise ValueError
342         except:
343             pass
344         print("Please enter correct account number...")
345
346     while True:
347         check_pin = input("Enter Your PIN : ")
348         try:
349             check_pin = int(check_pin)
350             break
351         except:
352             pass
353         print("Please enter a valid input...")
354
355     if check_pin == accounts[account_number]["PIN"]:
356         print(f"Your Balance is ₹{accounts[account_number]['Balance']}.")
357         main()
358     else:
359         print("The Pin entered is not correct.")
360         main()
361
362
363 def fd_enquiry():
364     while True:
```

```
365         amount = input("Enter the amount : ₹")
366         try:
367             amount = float(amount)
368             break
369         except:
370             pass
371         print("Please enter a valid amount.")
372     while True:
373         time = input("Enter how many years you want to file fixed deposit : ")
374         try:
375             time = int(time)
376             break
377         except:
378             pass
379         print("Please enter an integer.")
380     while True:
381         age = input("Enter your age : ")
382         try:
383             age = int(age)
384             break
385         except:
386             pass
387         print("Please enter an integer.")
388     if 60 <= age <= 80:
389         rate_of_interest = 7.50
390     else:
391         rate_of_interest = 6.50
392 
393     maturity_amnt = amount + (amount * time * rate_of_interest) / 100
394 
395     print(f"Your maturity amount is ₹{maturity_amnt}.")
396     main()
397 
398 
399 def forgot_details():
400     accounts = load_accounts()
401     name = input("Enter your name : ").lower()
402     if ' ' in name:
403         name = name.split()[0]
404     else:
405         name = name
406     print("Just give us a second...")
407     time.sleep(3)
408     for i in accounts:
409         if name in accounts[i]['Name'].lower().split():
410             user_answer = input(accounts[i]['Security Question'] + ':')
411             if user_answer.lower() == accounts[i]['Security Answer'].lower():
412                 print(f'''
413             Account Number : {i}
414             Name : {accounts[i]['Name']}
415             PIN : {accounts[i]['PIN']}
416             Group : {accounts[i]['Group']}
417             Date of Birth : {accounts[i]['Date of Birth']}
418             Gender : {accounts[i]['Gender']}
419             Status : {accounts[i]['Status']}
420             Mother's Name : {accounts[i]["Mother's name"]}
421             Father's Name : {accounts[i]["Father's name"]}
422             Married Status : {accounts[i]["Married Status"]}
423             Nationality : {accounts[i]["Nationality"]}
424             PAN Number : {accounts[i]["PAN Number"]}
425             Aadhar Number : {accounts[i]["Aadhar Number"]}
426             Address : {accounts[i]["Address"]}
427             Pin Code : {accounts[i]["Pin Code"]}
428             Mobile Number : {accounts[i]["Mobile Number"]}
429             Email : {accounts[i]["Email Address"]}
430             ''')
431                 main()
432             else:
433                 print("Your answer does not match.")
434                 main()
435         else:
436             continue
437     print("Your account does not exist.")
438     main()
```

```
439
440
441 def main():
442     while True:
443         print("\nWelcome to The Swiss Bank!")
444         print("[1] Open Account")
445         print("[2] Deposit Money")
446         print("[3] Withdraw Money")
447         print("[4] Check Balance")
448         print("[5] Fixed Deposit Enquiry")
449         print("[6] Forgot Details")
450         print("[7] Exit")
451
452         choice = input("Enter your choice (1-7): ")
453
454         if choice == "1":
455             open_account()
456         elif choice == "2":
457             deposit_money()
458         elif choice == "3":
459             withdraw_money()
460         elif choice == "4":
461             check_balance()
462         elif choice == "5":
463             fd_enquiry()
464         elif choice == "6":
465             forgot_details()
466         elif choice == "7":
467             print("\nExiting program. Thank you!")
468             break
469         else:
470             print("Invalid choice. Please enter a number between 1 and 7.")
471
472
473 if __name__ == "__main__":
474     print(title)
475     main()
476
```