```
import socket
import json
import os

# ---------------------------- USER AUTH ----------------------------
USER_FILE = "users.json"
if not os.path.exists(USER_FILE):
    with open(USER_FILE, "w") as f:
        json.dump({}, f)

def load_users():
    with open(USER_FILE, "r") as f:
        return json.load(f)

def save_users(users):
    with open(USER_FILE, "w") as f:
        json.dump(users, f, indent=4)

# ---------------------------- WORLD CUP DATA ----------------------------
men_finals = {

    "2002": {
    "matchup": "Brazil vs Germany",
    "winner": "Brazil",
    "score": "2-0",
    "scorers": "Ronaldo 67', Ronaldo 79'"
  },
        "2006": {
    "matchup": "Italy vs France",
    "winner": "Italy",
    "score": "1-1 (Italy won on penalties)",
    "scorers": "Materazzi 19' | Zidane 7' (P)"
  },
        "2010": {
    "matchup": "Spain vs Netherlands",
    "winner": "Spain",
    "score": "1-0",
    "scorers": "Iniesta 116'"
  },
        "2014": {
    "matchup": "Germany vs Argentina",
    "winner": "Germany",
    "score": "1-0",
    "scorers": "Gotze 113'"
  },
        "2018": {
    "matchup": "France vs Croatia",
    "winner": "France",
    "score": "4-2",
    "scorers":"Mandzukic (OG), Griezmann, Pogba, Mbappe | Perisic, Mandzukic"
  },
        "2022": {
    "matchup": "Argentina vs France",
    "winner": "Argentina",
    "score": "3-3 (Argentina won on penalties)",
    "scorers":"Messi x2, Di Maria | Mbappe hat-trick"
    }
  }
Men_team_history = {
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    "Argentina": "[1978, 1986, 2022]",
    "Brazil": "[1958, 1962, 1970, 1994, 2002]",
    "Croatia": "[]",
    "England": "[1966]",
    "France": "[1998, 2018]",
    "Germany": "[1954, 1974, 1990, 2014]",
    "Italy": "[1934, 1938, 1982, 2006]",
    "Spain": "[2010]",
    "Sweden": "[]",
    "Uruguay": "[1930, 1950]",
    "Portugal": "[]"
}


women_finals = {
    "2003": {
        "matchup": "Germany vs Sweden",
        "winner": "Germany",
        "score": "2-1",
        "scorers": "Meinert  46', Künzer gold-colored soccer ball 98' | Ljungberg
41'"
    },
    "2007": {
        "matchup":"Germany vs Brazil",
        "winner": "Germany",
        "score":"2-0",
        "scorers":"Prinz  52',Laudehr  86'"
    },
    "2011": {
        "matchup":"Japan vs USA",
        "winner":"Japan",
        "score":"2-2 (3-1 pens)",
        "scorers":"Miyama  81'Sawa  117' | Morgan  69', Wambach  104'"
    },
    "2015": {
        "matchup":"USA vs Japan",
        "winner":"USA",
        "score":"5-2",
        "scorers":"Lloyd 3', 5', 16', Holiday  14', Heath  54 | Ōgimi  27',
Johnston  52' (o.g.)"
    },
    "2019": {
        "matchup":"USA vs Netherlands",
        "winner":"USA",
        "score":"2-0",
        "scorers":"Rapinoe  61' (pen.),Lavelle  69'"
    },
    "2023": {
        "matchup":"Spain vs England",
        "winner":"Spain",
        "score":"1-0",
        "scorers":"Olga Carmona 29'"
        }
}
Women_team_history = {
    "Argentina": "[1978, 1986, 2022]",
    "Germany": "[1954, 1974, 1990, 2014]",
    "Brazil": "[1958, 1962, 1970, 1994, 2002]",
    "USA Women": "[1991, 1999, 2015, 2019]",
```

```
    "Japan Women": "[2011]",
    "Spain Women": "[2023]"
}

# ---------------------------- LOGIN / SIGN-UP ----------------------------
def login_or_signup(conn):
    while True:
        conn.send(b"Welcome to FIFA!\n1: Login\n2: Create Account\n> ")
        choice = conn.recv(1024).decode().strip()
        users = load_users()

        if choice == "1":
            conn.send(b"Enter username:\n> ")
            username = conn.recv(1024).decode().strip()
            conn.send(b"Enter password:\n> ")
            password = conn.recv(1024).decode().strip()
            if username in users and users[username] == password:
                conn.send(f"Login successful! Welcome {username}.\n".encode())
                return username
            else:
                conn.send(b"Invalid login. Try again.\n")
        elif choice == "2":
            conn.send(b"Choose username:\n> ")
            username = conn.recv(1024).decode().strip()
            conn.send(b"Choose password:\n> ")
            password = conn.recv(1024).decode().strip()
            users[username] = password
            save_users(users)
            conn.send(f"Account created! Welcome {username}.\n".encode())
            return username
        else:
            conn.send(b"Invalid choice.\n")

# ---------------------------- CLIENT HANDLER ----------------------------
def handle_client(conn):
    username = login_or_signup(conn)

    while True:
        main_menu = f"\nWelcome {username}!\n1: Men's World Cup\n2: Women's World
Cup\n3: Exit\n> "
        conn.send(main_menu.encode())
        choice = conn.recv(1024).decode().strip()

        if choice == "3":
            conn.send(b"Goodbye!\n")
            break
        elif choice == "1":
            finals = men_finals
            history = Men_team_history
            wc_name = "Men's World Cup"

        elif choice == "2":
            finals = women_finals
            history = Women_team_history
            wc_name = "Women's World Cup"

        else:
            conn.send(b"Invalid choice.\n")
            continue
```

```
# ---------------- SUBMENU ----------------
while True:
    submenu = (
        f"\n--- {wc_name} ---\n"
        "1: Finals & details\n"
        "2: Team history\n"
        "3: Back to main menu\n> "
    )
    conn.send(submenu.encode())
    sub = conn.recv(1024).decode().strip()

    # BACK
    if sub == "3":
        break

    # ---------- FINALS ----------
    elif sub == "1":
        years = ", ".join(str(y) for y in finals.keys())
        conn.send(f"Available years: {years}\nEnter year:\n> ".encode())

        year = conn.recv(1024).decode().strip()
        print(year)

       # if year.isdigit():
        #    year = int(year)
        if year in finals:
            print("YES")
            info = finals[year]
            msg = (
                f"\nFinal Match: {info['matchup']}\n"
                f"Score: {info['score']}\n"
                f"Scorers: {info['scorers']}\n"
                f"Winner: {info['winner']}\n"
                )
            conn.send(msg.encode())
            continue

        conn.send(b"Year not found.\n")

    # ---------- TEAM HISTORY ----------
    elif sub == "2":
        teams = ", ".join(history.keys())
        conn.send(f"Available teams: {teams}\nChoose team:\n> ".encode())

        team = conn.recv(1024).decode().strip()

        if team in history:
            print("YES")
            wins = history[team]

            if wins:
                msg = f"{team} won {len(wins)} World Cups: {wins}\n"
            else:
                msg = f"{team} has not won a World Cup.\n"

            conn.send(msg.encode())
            continue
```

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                conn.send(b"Team not found.\n")

            # INVALID SUBMENU CHOICE
            else:
                conn.send(b"Invalid choice.\n")

    conn.close()

# ---------------------------- SERVER ----------------------------
HOST = "127.0.0.1"
PORT = 5000
server = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
server.bind((HOST, PORT))
server.listen(5)
print("Server running...")

while True:
    conn, addr = server.accept()
    handle_client(conn)
```