LMS: Assignment

AIM: 1. Create Chatbot using Python Programming basic concepts for respective topic. 2. Show working demonstration of chatbot. 3. Upload code and Output screenshots in LMS.

Topic: Country-Capital Bot

Code of the implementation:

```
CAPITALS = {

    "afghanistan": "Kabul",

    "albania": "Tirana",

    "algeria": "Algiers",

    "andorra": "Andorra la Vella",

    "angola": "Luanda",

    "antigua and barbuda": "Saint John's",

    "argentina": "Buenos Aires",

    "armenia": "Yerevan",

    "australia": "Canberra",

    "austria": "Vienna",

    "azerbaijan": "Baku",

    "bahamas": "Nassau",

    "bahrain": "Manama",

    "bangladesh": "Dhaka",

    "barbados": "Bridgetown",

    "belarus": "Minsk",

    "belgium": "Brussels",

    "belize": "Belmopan",

    "benin": "Porto-Novo",

    "bhutan": "Thimphu",

    "bolivia": "La Paz (Administrative) / Sucre (Constitutional)",

    "bosnia and herzegovina": "Sarajevo",

    "botswana": "Gaborone",
```

```
    "brazil": "Brasília",

    "brunei": "Bandar Seri Begawan",

    "bulgaria": "Sofia",

    "burkina faso": "Ouagadougou",

    "burundi": "Gitega",

    "cabo verde": "Praia",

    "cambodia": "Phnom Penh",

    "cameroon": "Yaoundé",

    "canada": "Ottawa",

    "central african republic": "Bangui",

    "chad": "N'Djamena",

    "chile": "Santiago",

    "china": "Beijing",

    "colombia": "Bogotá",

    "comoros": "Moroni",

    "democratic republic of congo": "Kinshasa",

    "congo": "Brazzaville",

    "costa rica": "San José",

    "côte d'ivoire": "Yamoussoukro",

    "croatia": "Zagreb",

    "cuba": "Havana",

    "cyprus": "Nicosia",

    "czechia": "Prague",

    "denmark": "Copenhagen",

    "djibouti": "Djibouti",

    "dominica": "Roseau",

    "dominican republic": "Santo Domingo",

    "ecuador": "Quito",

    "egypt": "Cairo",

    "el salvador": "San Salvador",

    "equatorial guinea": "Malabo",
```

```
"eritrea": "Asmara",

"estonia": "Tallinn",

"eswatini": "Mbabane (Administrative) / Lobamba (Royal & Legislative)",

"ethiopia": "Addis Ababa",

"fiji": "Suva",

"finland": "Helsinki",

"france": "Paris",

"gabon": "Libreville",

"gambia": "Banjul",

"georgia": "Tbilisi",

"germany": "Berlin",

"ghana": "Accra",

"greece": "Athens",

"grenada": "Saint George's",

"guatemala": "Guatemala City",

"guinea": "Conakry",

"guinea-bissau": "Bissau",

"guyana": "Georgetown",

"haiti": "Port-au-Prince",

"honduras": "Tegucigalpa",

"hungary": "Budapest",

"iceland": "Reykjavík",

"india": "New Delhi",

"indonesia": "Jakarta",

"iran": "Tehran",

"iraq": "Baghdad",

"ireland": "Dublin",

"israel": "Jerusalem",

"italy": "Rome",

"jamaica": "Kingston",

"japan": "Tokyo",
```

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```
    "jordan": "Amman",

    "kazakhstan": "Astana",

    "kenya": "Nairobi",

    "kiribati": "Tarawa",

    "kosovo": "Pristina",

    "kuwait": "Kuwait City",

    "kyrgyzstan": "Bishkek",

    "laos": "Vientiane",

    "latvia": "Riga",

    "lebanon": "Beirut",

    "lesotho": "Maseru",

    "liberia": "Monrovia",

    "libya": "Tripoli",

    "liechtenstein": "Vaduz",

    "lithuania": "Vilnius",

    "luxembourg": "Luxembourg City",

    "madagascar": "Antananarivo",

    "malawi": "Lilongwe",

    "malaysia": "Kuala Lumpur",

    "maldives": "Malé",

    "mali": "Bamako",

    "malta": "Valletta",

    "marshall islands": "Majuro",

    "mauritania": "Nouakchott",

    "mauritius": "Port Louis",

    "mexico": "Mexico City",

    "micronesia": "Palikir",

    "moldova": "Chișinău",

    "monaco": "Monaco",

    "mongolia": "Ulaanbaatar",

    "montenegro": "Podgorica",
```

```
  "morocco": "Rabat",

  "mozambique": "Maputo",

  "myanmar": "Nay Pyi Taw",

  "namibia": "Windhoek",

  "nauru": "Yaren (De Facto)",

  "nepal": "Kathmandu",

  "netherlands": "Amsterdam",

  "new zealand": "Wellington",

  "nicaragua": "Managua",

  "niger": "Niamey",

  "nigeria": "Abuja",

  "north korea": "Pyongyang",

  "north macedonia": "Skopje",

  "norway": "Oslo",

  "oman": "Muscat",

  "pakistan": "Islamabad",

  "palau": "Ngerulmud",

  "panama": "Panama City",

  "papua new guinea": "Port Moresby",

  "paraguay": "Asunción",

  "peru": "Lima",

  "philippines": "Manila",

  "poland": "Warsaw",

  "portugal": "Lisbon",

  "qatar": "Doha",

  "romania": "Bucharest",

  "russia": "Moscow",

  "rwanda": "Kigali",

  "saint kitts and nevis": "Basseterre",

  "saint lucia": "Castries",

  "saint vincent and the grenadines": "Kingstown",
```

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```
"samoa": "Apia",

"san marino": "San Marino",

"sao tome and principe": "São Tomé",

"saudi arabia": "Riyadh",

"senegal": "Dakar",

"serbia": "Belgrade",

"seychelles": "Victoria",

"sierra leone": "Freetown",

"singapore": "Singapore",

"slovakia": "Bratislava",

"slovenia": "Ljubljana",

"solomon islands": "Honiara",

"somalia": "Mogadishu",

"south africa": "Pretoria (Administrative)",

"south korea": "Seoul",

"south sudan": "Juba",

"spain": "Madrid",

"sri lanka": "Sri Jayawardenepura Kotte (Legislative)",

"sudan": "Khartoum",

"suriname": "Paramaribo",

"sweden": "Stockholm",

"switzerland": "Bern",

"syria": "Damascus",

"taiwan": "Taipei",

"tajikistan": "Dushanbe",

"tanzania": "Dodoma",

"thailand": "Bangkok",

"timor-leste": "Dili",

"togo": "Lomé",

"tonga": "Nukuʻalofa",

"trinidad and tobago": "Port of Spain",
```

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```
    "tunisia": "Tunis",

    "turkey": "Ankara",

    "turkmenistan": "Ashgabat",

    "tuvalu": "Funafuti",

    "uganda": "Kampala",

    "ukraine": "Kyiv",

    "united arab emirates": "Abu Dhabi",

    "united kingdom": "London",

    "uk": "London",

    "united states": "Washington, D.C.",

    "usa": "Washington, D.C.",

    "uruguay": "Montevideo",

    "uzbekistan": "Tashkent",

    "vanuatu": "Port Vila",

    "vatican city": "Vatican City",

    "venezuela": "Caracas",

    "vietnam": "Hanoi",

    "yemen": "Sana'a",

    "zambia": "Lusaka",

    "zimbabwe": "Harare",

}


def country_capital_chatbot():
    """Runs the main loop for the Country Capital Chatbot."""
    print("Welcome to the Country Capital Bot!")
    print("Type the name of a country to find its capital.")
    print("Type 'list' to see all available countries.")
    print("Type 'quit' or 'exit' to stop the bot.")
    print("-" * 30)
```

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```python
    while True:
        user_input = input("Enter a country name (or 'quit'): ").strip()


        processed_input = user_input.lower()
        if processed_input in ('quit', 'exit'):
            print("Thank you for using the Country Capital Bot. Goodbye!")
            break


        elif processed_input == 'list':
            countries_list = ", ".join(c.title() for c in sorted(CAPITALS.keys()))
            print(f"I know the capitals for these countries: {countries_list}")


        elif processed_input in CAPITALS:
            capital = CAPITALS[processed_input]
            print(f"The capital of {processed_input.title()} is {capital}.")


        elif user_input == "":

            pass


        else:

            print(f"Sorry, I don't have the capital for '{user_input.title()}' or it's not a valid command.")
            print("Please try a different country or type 'list'.")


if __name__ == "__main__":
    country_capital_chatbot()
```

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Output Screenshots :

Starting the bot, it will show options to list, name the countries to get its capital, or to quit the bot.

Here we have given input of list to see the list of countries to get its capital.

Giving valid input, it shows the capital of the following country:

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And many more:

```
Enter a country name (or 'quit'): south korea
The capital of South Korea is Seoul.
Enter a country name (or 'quit'): ukraine
The capital of Ukraine is Kyiv.
Enter a country name (or 'quit'): tuvalu
The capital of Tuvalu is Funafuti.
Enter a country name (or 'quit'): malaysia
The capital of Malaysia is Kuala Lumpur.
Enter a country name (or 'quit'): peru
The capital of Peru is Lima.
Enter a country name (or 'quit'): sweden
The capital of Sweden is Stockholm.
Enter a country name (or 'quit'): 
```

But if we give invalid input or wrong country spelling, it will give something like this:

```
Enter a country name (or 'quit'): okok
Sorry, I don't have the capital for 'Okok' or it's not a valid command.
Please try a different country or type 'list'.
Enter a country name (or 'quit'): indai
Sorry, I don't have the capital for 'Indai' or it's not a valid command.
Please try a different country or type 'list'.
Enter a country name (or 'quit'): 
```