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Practical No: 10

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Aim: Implementation of React useRef, router, keys etc.

Q) Create functional components to demonstrate router

CODE (Rulers):

```
import { useState, useEffect } from "react";

const HomePage = () => (
  <div className="p-5 text-center">
    <h1 className="text-3xl font-bold mb-4"><img alt="crown icon" data-bbox="268 561 281 574"/> Great Rulers of History</h1>
    <p className="text-lg mb-2">
      Explore the lives and legacies of history's most influential leaders!
    </p>
    <p className="text-lg mb-6">
      From ancient conquerors to military geniuses, discover their stories.
    </p>
    <div className="mt-5">
      <div
        className="grid grid-cols-1 md:grid-cols-3 gap-4 mt-5">
        <div
          className="p-4 bg-blue-50 rounded-lg">
          <h4
            className="font-semibold text-lg">Military Genius</h4>
```

```
      <p>Strategic brilliance and battlefield tactics</p>
    </div>
    <div
      className="p-4 bg-green-50 rounded-lg">
      <h4
        className="font-semibold text-lg">Empire Building</h4>
      <p>Conquests and territorial expansion</p>
    </div>
    <div
      className="p-4 bg-purple-50 rounded-lg">
      <h4
        className="font-semibold text-lg">Lasting Legacy</h4>
      <p>Impact on civilization and culture</p>
    </div>
  </div>
);

const NapoleonPage = () => (
  <div className="p-5 text-center">
```

```
    <h1 className="text-3xl font-bold mb-4"><img alt="crown icon" data-bbox="814 485 827 498"/> Napoleon Bonaparte</h1>
    <p className="text-lg mb-6">
      The French military genius who dominated Europe
    </p>
    <div className="max-w-3xl mx-auto p-5 bg-orange-50 rounded-lg text-left">
      <h3
        className="text-xl font-semibold mb-3">
        Historical Significance
      </h3>
      <p className="mb-4">
        Napoleon Bonaparte (1769-1821) was a French military commander and political leader who rose to prominence during the French Revolution and led several successful campaigns during the Revolutionary Wars.
      </p>
```

```

<h3
className="text-xl font-
semibold mb-3">Key
Achievements</h3>
<ul
className="list-disc list-
inside space-y-2 mb-4">
<li>👑
Crowned Emperor of the French
in 1804</li>
<li>
🏆 Won
numerous battles including
Austerlitz and Marengo
</li>
<li>📜
Established the Napoleonic
Code</li>
<li>🌍
Controlled most of
continental Europe</li>
</ul>

<div
className="mt-4 p-3 bg-blue-
100 rounded-lg">
<strong>Famous
Quote:</strong> "Impossible
is a word to be found
only in the
dictionary of fools."
</div>
</div>
);

const CaesarPage = () => (
  <div className="p-5 text-
center">
    <h1 className="text-
3xl font-bold mb-4">🏰 Julius
Caesar</h1>
    <p className="text-lg
mb-6">
      The legendary
      Roman general and statesman
    </p>

    <div className="grid
grid-cols-1 md:grid-cols-3
gap-5 mt-5">
      <div
className="p-5 border-2
border-brown-600 rounded-lg
bg-gray-50">
        <h3
className="text-lg font-
semibold mb-2">👑 Legacy
        <p
className="mb-3">Julian
Calendar and literary
works</p>
        <div
className="text-xl font-bold
text-gray-700">
          Eternal
        </div>
        <div
className="mt-3">
          <strong>Assassinated:</strong> Ides of
          March, 44 BC
        </div>
      </div>
    </div>
  </div>
);

```

```

Conqueror
of Gaul and victor of the
Civil War
</p>
<div
className="text-xl font-bold
text-brown-600">58-50
BC</div>
<div
className="mt-3">
  <strong>6
allied Wars:</strong> 8 years
of conquest
</div>
<div
className="p-5 border-2
border-red-700 rounded-lg bg-
gray-50">
  <h3
className="text-lg font-
semibold mb-2">🏰
Political Reforms
</h3>
  <p
className="mb-3">Transformed
the Roman Republic</p>
  <div
className="text-xl font-bold
text-red-700">49-44 BC</div>
  <div
className="mt-3">
    <strong>Dictator:</strong> Appointed
    for life
  </div>
</div>
<div
className="p-5 border-2
border-gray-700 rounded-lg
bg-gray-50">
  <h3
className="text-lg font-
semibold mb-2">📜 Legacy</h3>
  <p
className="mb-3">Julian
Calendar and literary
works</p>
  <div
className="text-xl font-bold
text-gray-700">
    Eternal
  </div>
  <div
className="mt-3">
    <strong>Assassinated:</strong> Ides of
    March, 44 BC
  </div>
</div>
</div>

```

```

<div className="mt-5
p-4 bg-blue-50 rounded-lg">
  <strong>Famous
Quote:</strong> "Veni, Vidi,
Vici" (I came, I saw, I
conquered)
</div>
);

const HannibalPage = () => (
  <div className="p-5 text-
center">
    <h1 className="text-
3xl font-bold mb-4">👑
Hannibal Barca</h1>
    <p className="text-lg
mb-6">
      The Carthaginian
      general who crossed the Alps
      with elephants
    </p>

    <div className="max-
w-2xl mx-auto p-5 bg-gray-50
rounded-lg text-left">
      <div
className="mb-4">
        <label
className="block mb-2 font-
semibold">
          Greatest
          Achievement
        </label>
        <div
className="p-3 bg-white
rounded border border-gray-
300">
          Crossing
          the Alps with war elephants
          to attack Rome
        </div>
      </div>

      <div
className="mb-4">
        <label
className="block mb-2 font-
semibold">
          Famous
          Battles
        </label>
        <div
className="p-3 bg-white
rounded border border-gray-
300">
          Trebia,
          Lake Trasimene, Cannae
        </div>
      </div>

      <div
className="mb-4">

```

```

        <label
className="block mb-2 font-
semibold">
            Military
Tactics
        </label>
        <select
className="w-full p-3 rounded
border border-gray-300">
            <option>D
ouble Envelopment</option>
            <option>A
mbush Tactics</option>
            <option>S
trategic Deception</option>
            <option>E
lephant Warfare</option>
        </select>
    </div>

    <div
className="mb-4">
        <label
className="block mb-2 font-
semibold">
            Historica
l Impact
        </label>
        <textarea
            value="Ha
nnibal is considered one of
the greatest military
commanders in history. His
tactics at the Battle of
Cannae are still studied in
military academies
worldwide."
            rows={4}
className=
"w-full p-3 rounded border
border-gray-300"
            readOnly
        />
    </div>

    <button
className="w-full p-3 bg-
brown-600 text-white border-
none rounded-lg text-lg
cursor-pointer hover:bg-
brown-700 transition-colors">
        Study
Hannibal's Strategies
    </button>
</div>

    <div className="mt-
8">
        <h3
className="text-xl font-
semibold mb-4">Military
Legacy</h3>
        <div
className="flex justify-
center gap-5 mt-4 flex-wrap">

```

```

        <div>🏠
Master of Tactics</div>
        <div>🏔️
Alpine Crossing</div>
        <div>🏰 15
Years in Italy</div>
    </div>
</div>
);

const RouterDemo = () => {
    const [currentPath,
setCurrentPath] =
useState(window.location.path
name);

    useEffect(() => {
        const handlePopState
= () => {
            setCurrentPath(wi
ndow.location.pathname);
        };

        window.addEventListen
er("popstate",
handlePopState);
        return () =>
window.removeEventListener("p
opstate", handlePopState);
    }, []);

    const navigate = (path)
=> {
        window.history.pushSt
ate({}, "", path);
        setCurrentPath(path);
    };

    const renderComponent =
() => {
        switch (currentPath)
        {
            case "/":
                return
<HomePage />;
            case "/napoleon":
                return
<NapoleonPage />;
            case "/caesar":
                return
<CaesarPage />;
            case "/hannibal":
                return
<HannibalPage />;
            default:
                return (
                    <div
className="p-10 text-center">
                        <h1
className="text-3xl font-bold
mb-4">
                            4
04 - RuLer Not Found
                    </h1>

```

```




        className="text-lg mb-6">
            T
he historical ruler you're
looking for doesn't
            e
xist in our records.
        </p>
    </butt
on>
        o
nClick={() => navigate("/")}
        c
lassName="px-5 py-3 bg-brown-
600 text-white border-none
rounded-lg hover:bg-brown-700
transition-colors"
    >
        R
eturn to Hall of Rulers
    </butt
on>
    </div>
    );
}
};

const isActive = (path)
=> currentPath === path;

return (
    <div className="p-5
m-3 rounded-lg bg-gray-50">
        <nav
className="mb-5 p-4 bg-amber-
50 rounded-lg border border-
amber-200">
            <h3
className="text-xl font-
semibold mb-3">
                Gallery
of Great Leaders
            </h3>
            <div
className="flex gap-3 flex-
wrap">
                <button
                    onCli
ck={() => navigate("/")}
                    class
Name={`px-4 py-3 text-white
border-none rounded-lg
cursor-pointer transition-
colors ${
                        i
sActive("/")
                            ? "bg-brown-600"
                                : "bg-amber-600 hover:bg-
amber-700"
                        }`>
                    >
                        🏠
                    Home

```

```

        </button>
        <button
            onClick
                ck={() =>
                    navigate("/napoleon")}
                class
                    Name={`px-4 py-3 text-white
                        border-none rounded-lg
                        cursor-pointer transition-
                        colors ${
                            sActive("/napoleon")
                                ? "bg-brown-600"
                                : "bg-amber-600 hover:bg-
                                    amber-700"
                        }`}
                >
                    
                </button>
            <button
                onClick
                    ck={() =>
                        navigate("/caesar")}
                    class
                        Name={`px-4 py-3 text-white
                            border-none rounded-lg
                            cursor-pointer transition-
                            colors ${
                                sActive("/caesar")
                                    ? "bg-brown-600"
                                    : "bg-amber-600 hover:bg-
                                        amber-700"
                            }`}
                    >
                        
                    </button>
            <button
                onClick
                    ck={() =>
                        navigate("/hannibal")}
                    class
                        Name={`px-4 py-3 text-white
                            border-none rounded-lg
                            cursor-pointer transition-
                            colors ${
                                sActive("/hannibal")
                                    ? "bg-brown-600"
                                    : "bg-amber-600 hover:bg-
                                        amber-700"
                            }`}
                    >
                        
                    </button>
        </div>
    </nav>

    <div
        className="mb-4 p-3 bg-amber-
            50 rounded-lg border border-
            amber-200">
        <strong>Curre
            nt Historical
            Figure:</strong>{" "}
        <code
            className="bg-white px-2 py-1
            rounded">
            {currentP
                ath}
        </code>
    </div>

    <div
        className="border border-
            amber-200 rounded-lg min-h-80
            bg-white">
        {renderCompon
            ent()}
    </div>
    </div>
    );
};

export default RouterDemo;

```

CODE (Rendering):

```

import Rulers from "../components/Rulers";

function App() {
    return (
        <Rulers />
    );
}

export default App;

```

OUTPUT:

Gallery of Great Leaders

[Home](#) [Napoleon](#) [Caesar](#) [Hannibal](#)
Current Historical Figure: /caesar

Julius Caesar

The legendary Roman general and statesman

Military Campaigns

Conqueror of Gaul and victor of the Civil War

58-50 BC

Gaulic Wars: 8 years of conquest.

Political Reforms

Transformed the Roman Republic

49-44 BC

Dictator: Appointed for life

Legacy

Julian Calendar and literary works

Eternal Impact:

Assassinated: Ides of March, 44 BC

Famous Quote: "Veni, Vidi, Vici" (I came, I saw, I conquered)

Gallery of Great Leaders

[Home](#) [Napoleon](#) [Caesar](#) [Hannibal](#)
Current Historical Figure: /napoleon





Napoleon Bonaparte

The French military genius who dominated Europe

Historical Significance

Napoleon Bonaparte (1769-1821) was a French military commander and political leader who rose to prominence during the French Revolution and led several successful campaigns during the Revolutionary Wars.

Key Achievements

-  Crowned Emperor of the French in 1804
-  Won numerous battles including Austerlitz and Marengo
-  Established the Napoleonic Code
-  Controlled most of continental Europe

Famous Quote: "Impossible is a word to be found only in the dictionary of fools."

Gallery of Great Leaders

[Home](#) [Napoleon](#) [Caesar](#) [Hannibal](#)
Current Historical Figure: /hannibal

Hannibal Barca

The Carthaginian general who crossed the Alps with elephants

Greatest Achievement

Crossing the Alps with war elephants to attack Rome

Famous Battles

Trebia, Lake Trasimene, Cannae


Military Tactics: Double Envelopment

Hannibal is considered one of the greatest military commanders

[Study Hannibal's Strategies](#)

Military Legacy

 Master of Tactics

 Alpine Crossing

 15 Years in Italy

Q) Create functional components to demonstrate useRef

CODE (FocusJasGews):

```
import { useRef } from "react";

function FocusJasGews() {
  const inputRef = useRef(null);

  const handleClick = () => {
    inputRef.current.focus();
  };

  return (
    <div>
```

```

        <input ref={inputRef}
type="text" placeholder="Jas Gews" />
        <button
onClick={handleClick}>Click to Jas
Gews</button>
      </div>
    );
  }
}

export default FocusJasGews;

```

CODE (Rendering):

```

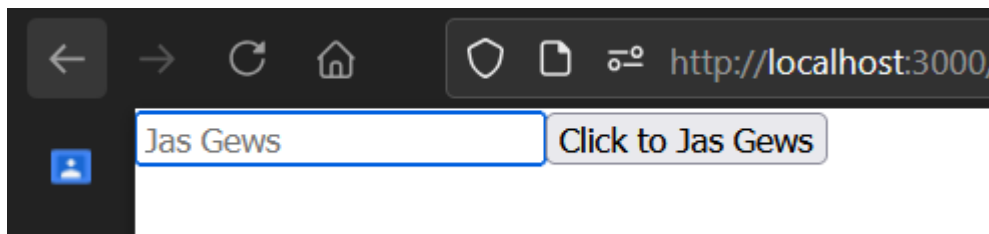
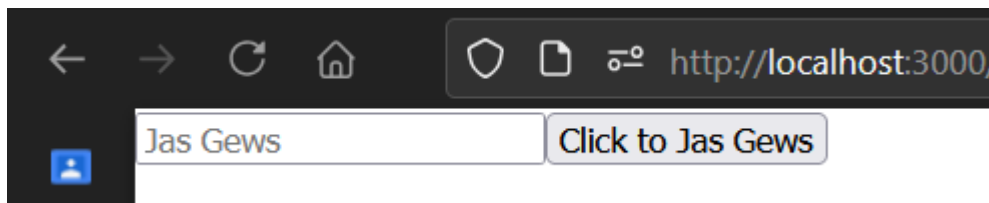
import FocusJasGews from "../components/FocusJasGews";

function App() {
  return (
    <FocusJasGews />
  );
}

export default App;

```

OUTPUT:



Q) Create functional components to demonstrate keys

CODE (JewTattoo):

```

import React, { useState }
from "react";

const JewTatto = () => {
  const [items,
setItem] = useState([
    { id: 1, name:
"Goldberg", number: 496242
},
    { id: 2, name:
"Rosenstein", number:
177854 },
    { id: 3, name:
"Silverman", number:
823659 },
    { id: 4, name:
"Feinberg", number: 896523
},
    { id: 5, name:
"Abramowitz", number:
564175 },
  ]);

  return (
    <div style={{
padding: "20px" }}>
      <h2>Jew Tatto
Number Demonstration</h2>

```

```

    <div>
      <h3>List
with Proper Keys:</h3>
      <ul>
        {items
      .map((item) => (
        <li
        i
        key={item.id}
        style={{
          color: item.color,
          padding: "5px",
          margin: "5px 0",
          {item.name} (Number:
          {item.number})
        })
      )
    </ul>
  </div>
);
export default JewTatto;

```

CODE (Rendering):

```
import JewTatto from "../components/JewTatto";

function App() {
  return (
    <JewTatto />
  );
}

export default App;
```

OUTPUT:

Jew Tattoo Number Demonstration

List with Proper Keys:

- Goldberg (Number: 496242)
- Rosenstein (Number: 177854)
- Silverman (Number: 823659)
- Feinberg (Number: 896523)
- Abramowitz (Number: 564175)