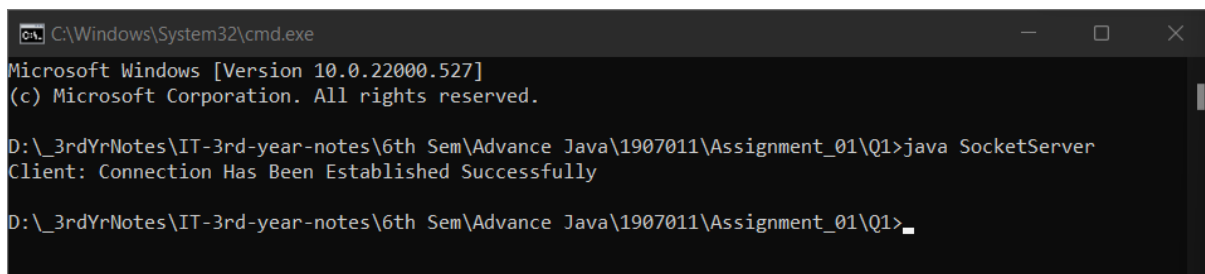


1. To create the server application, we need to create the instance of ServerSocket class. Here, we are using 6666 port number for the communication between the client and server. You may also choose any other port number. The accept() method waits for the client. If clients connects with the given port number, it returns an instance of Socket.

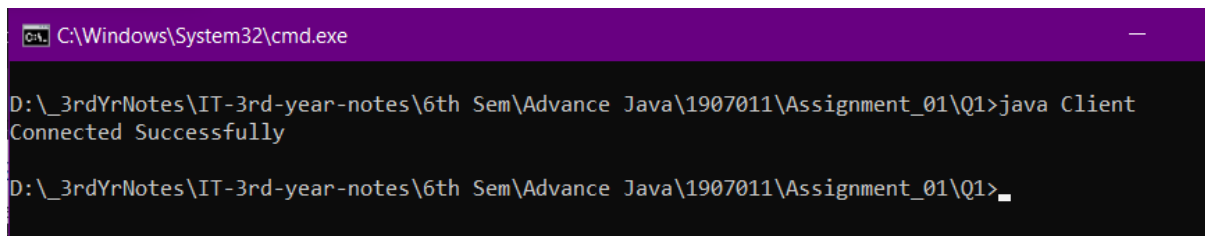


```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22000.527]
(c) Microsoft Corporation. All rights reserved.

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q1>java SocketServer
Client: Connection Has Been Established Successfully

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q1>_
```

Output at Server (SocketServer.java)



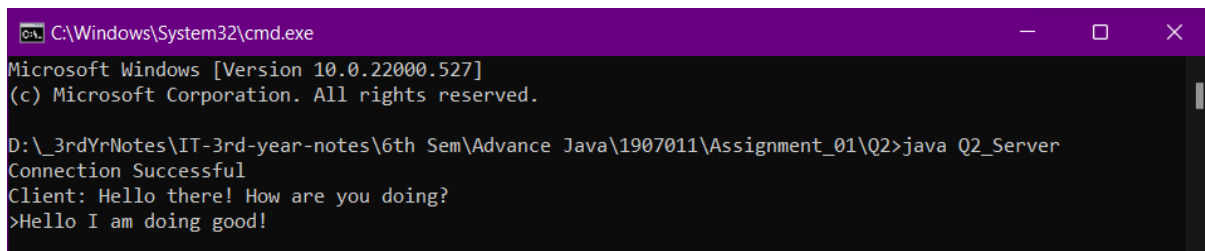
```
C:\Windows\System32\cmd.exe

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q1>java Client
Connected Successfully

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q1>_
```

Output at Client(Client.java)

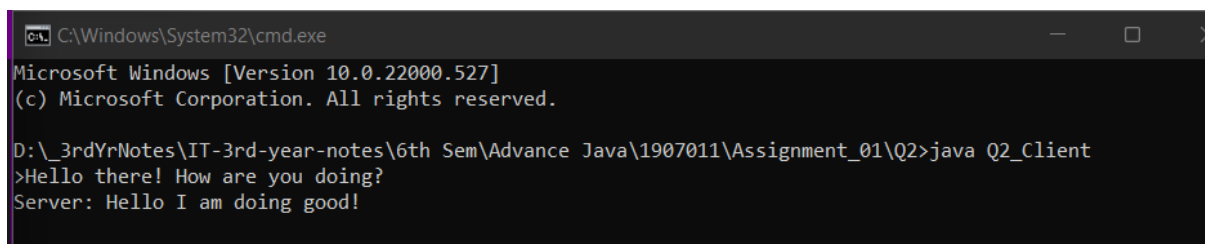
2. Client will write first to the server then server will receive and print the text. Then server will write to the client and client will receive and print the text.



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22000.527]
(c) Microsoft Corporation. All rights reserved.

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q2>java Q2_Server
Connection Successful
Client: Hello there! How are you doing?
>Hello I am doing good!
```

Output at Server (Q2_Server.java)



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22000.527]
(c) Microsoft Corporation. All rights reserved.

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q2>java Q2_Client
>Hello there! How are you doing?
Server: Hello I am doing good!
```

Output at Client (Q2_Client.java)

3. The URLConnection class provides many methods. We can display all the data of a webpage by using the `getInputStream()` method. It returns all the data of the specified URL in the stream that can be read and displayed.

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22000.527]
(c) Microsoft Corporation. All rights reserved.

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q3>java URLConnectionClass
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0, shrink-to-fit=no">
  <title>About Us - AnyoneCanCo.de</title>
  <link rel="stylesheet" href="assets/bootstrap/css/bootstrap.min.css">
  <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Montserrat:400,400i,700,700i,600,600i">
  <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Source+Sans+Pro:300,400,700">
  <link rel="stylesheet" href="assets/fonts/simple-line-icons.min.css">
  <link rel="stylesheet" href="assets/fonts/typicons.min.css">
  <link rel="stylesheet" href="assets/css/Contact-Form-Clean.css">
  <link rel="stylesheet" href="assets/css/Header-Blue.css">
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/baguettebox.js/1.10.0/baguettebox.min.css">
  <link rel="stylesheet" href="assets/css/vanilla-zoom.min.css">
</head>
<body>
  <nav class="navbar navbar-light navbar-expand-lg fixed-top bg-white clean-navbar">
    <div class="container">
      <a class="navbar-brand logo" href="index.html">SelfAssess</a>
      <button data-bs-toggle="collapse" class="navbar-toggler" data-bs-target="#navcol-1"><span class="visually-hidden">Toggle navigation</span><span class="navbar-toggler-icon"></span></button>
      <div class="collapse navbar-collapse" id="navcol-1">
        <ul class="navbar-nav ms-auto">
          <li class="nav-item"><a class="nav-link" href="index.html">Home</a></li>
          <li class="nav-item"><a class="nav-link" href="features.html">Features</a></li>
          <li class="nav-item"><a class="nav-link" href="faq.html">FAQ</a></li>
          <li class="nav-item"><a class="nav-link" href="contact-us.html">Contact Us</a></li>
        </ul>
      </div>
    </div>
  </nav>
  <main class="page">
    <section class="clean-block about-us">
      <div class="container">
        <div class="block-heading">
          <h2 class="text-info">About Me</h2>
          <p></p>
        </div>
        <div class="row justify-content-center">
          <div class="col-sm-6 col-lg-4">
            <div class="card text-center clean-card"></div>
          </div>
          <div class="col-sm-6 col-lg-4">
            <div class="card text-center clean-card">
              
              <div class="card-body">
                <div class="card-title">Pratay Dond</div>
                <p class="card-text">Student, Developer, Programmer</p>
                <div class="icons">
                  <a href="https://github.com/PratayDond/"><i class="icon-social-github"></i></a>
                  <a href="https://mail.google.com/mail/?view=cm&fs=1&tf=1&to=dondpratyay@gmail.com"><svg xmlns="http://www.w3.org/2000/svg" width="1em" height="1em" viewBox="0 0 24 24" fill="none">
                    <path d="M0 0 18 8.66 17.32 0 24 0 24 24 17.32 24 18 15.34 0 12.68 18 12.68 18 0 0 0" stroke="currentColor" stroke-width="2" stroke-linecap="round" stroke-linejoin="round"/>
                  </svg></a>
                  <a href="https://www.linkedin.com/in/pratay-dond-7944a3209/"><i class="icon-social-linkedin"></i></a>
                  <a href="https://www.instagram.com/prataydond/"><i class="icon-social-instagram"></i></a></div>
                </div>
              </div>
            </div>
          </div>
        </div>
      </div>
    </section>
  </main>
  <footer class="page-footer dark">
    <div class="page-copyright">
      <p>© 2021 - Developed By <a href="about-us.html">Pratay Dond</a></p>
    </div>
  </footer>
  <script src="assets/bootstrap/js/bootstrap.min.js"></script>
  <script src="https://cdnjs.cloudflare.com/ajax/libs/baguettebox.js/1.10.0/baguettebox.min.js"></script>
  <script src="assets/js/vanilla-zoom.js"></script>
  <script src="assets/js/theme.js"></script>
</body>
</html>

Host: prataydond.me
Protocol: http
File: /Self-Assess/about-us.html
```

Output (full output)

```
D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q3>java URLConnectionClass
<!DOCTYPE html>
<html>

<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0, shrink-to-fit=no">
  <title>About Us - AnyoneCanCo.de</title>
  <link rel="stylesheet" href="assets/bootstrap/css/bootstrap.min.css">
  <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Montserrat:400,400i,700,700i,600,600i">
  <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Source+Sans+Pro:300,400,700">
  <link rel="stylesheet" href="assets/fonts/simple-line-icons.min.css">
  <link rel="stylesheet" href="assets/fonts/typicons.min.css">
  <link rel="stylesheet" href="assets/css/Contact-Form-Clean.css">
  <link rel="stylesheet" href="assets/css/Header-Blue.css">
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/baguettebox.js/1.10.0/baguetteBox.min.css">
  <link rel="stylesheet" href="assets/css/vanilla-zoom.min.css">
</head>
```

Output (part 1)

```
<body>
  <nav class="navbar navbar-light navbar-expand-lg fixed-top bg-white clean-navbar">
    <div class="container"><a class="navbar-brand logo" href="index.html">SelfAssess</a><button data-bs-toggle="collapse" class="navbar-toggler" data-bs-target="#navcol-1"><span class="visually-hidden">Toggle navigation</span><span class="navbar-toggler-icon"></span></button>
    <div class="collapse navbar-collapse" id="navcol-1">
      <ul class="navbar-nav ms-auto">
        <li class="nav-item"><a class="nav-link" href="index.html">Home</a></li>
        <li class="nav-item"><a class="nav-link" href="features.html">Features</a></li>
        <li class="nav-item"><a class="nav-link" href="faq.html">FAQ</a></li>
        <li class="nav-item"><a class="nav-link" href="contact-us.html">Contact Us</a></li>
      </ul>
    </div>
  </nav>
  <main class="page">
    <section class="clean-block about-us">
      <div class="container">
        <div class="block-heading">
          <h2 class="text-info">About Me</h2>
          <p></p>
        </div>
        <div class="row justify-content-center">
          <div class="col-sm-6 col-lg-4 col-xl-4">
            <div class="card text-center clean-card"></div>
          </div>
          <div class="col-sm-6 col-lg-4">
            <div class="card text-center clean-card">
            <div class="card-body info">
              <h4 class="card-title">Pratyay Dhond</h4>
              <p class="card-text">Student, Developer, Programmer</p>
              <div class="icons"><a href="https://github.com/PratyayDhond"><i class="icon-social-github"></i></a><a href="https://mail.google.com/mail/?view=cm&fs=1&tf=1&to=dhondpratyay@gmail.com"><svg xmlns="http://www.w3.org/2000/svg" width="1em" height="1em" viewBox="0 0 24 24" fill="none">
                <path d="M3 8L10 8.06L13 12L10 15.94L3 16L3 8" stroke="currentColor" stroke-width="2" stroke-linecap="round" stroke-linejoin="round"></path>
              </svg></a><a href="https://www.linkedin.com/in/pratyay-dhond-7944a3209/"><i class="icon-social-linkedin"></i></a><a href="https://www.instagram.com/pratyaydhond/"><i class="icon-social-instagram"></i></a></div>
            </div>
          </div>
        </div>
      </div>
    </section>
  </main>
  <footer class="page-footer dark">
    <div class="footer-copyright">
      <p>© 2021 - Developed By <a href="about-us.html">Pratyay Dhond</a></p>
    </div>
  </footer>
  <script src="assets/bootstrap/js/bootstrap.min.js"></script>
  <script src="https://cdnjs.cloudflare.com/ajax/libs/baguettebox.js/1.10.0/baguetteBox.min.js"></script>
  <script src="assets/js/vanilla-zoom.js"></script>
  <script src="assets/js/theme.js"></script>
</body>
</html>
```

Output (part 2)

```
Host: pratyaydhond.me
Protocol: http
File: /Self-Assess/about-us.html
D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q3>
```

Output (part 3)

4. Simple example of InetAddress class to get ip address of www.javatpoint.com website.

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22000.527]
(c) Microsoft Corporation. All rights reserved.

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q4>java Q4
Host Name: www.javatpoint.com
IP: 104.21.79.8
```

Output Q4.java

5. Sending and receiving DatagramPacket by DatagramSocket.

```
C:\Windows\System32\cmd.exe

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q5>java Q5_Client
Hello I am Q5_Client speaking

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q5>
```

Sending datagramPacket (Q5_client.java)

```
C:\Windows\System32\cmd.exe

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q5>java Q5_Server
Connection Established.
Client: Hello I am Q5_Client speaking

D:\_3rdYrNotes\IT-3rd-year-notes\6th Sem\Advance Java\1907011\Assignment_01\Q5>_
```

Receiving datagramPacket (Q5_server.java)