```java
import java.net.*;
import java.io.*;
import java.util.Scanner;
public class NewsSearch
{
    public String title1 = "", title2 = "", title3 = "";
    //public String link1 = "\tLink: https://", link2 = "\tLink: https://", link3 = "\tLink: https://";
    private static final String WEBSITE_PLACE = "www.wsj.com/search/term.html?KEYWORDS=";
    private static final String WEBSITE_ZIP_START = "http://www.geonames.org/postalcode-search.html?q=";
    private static final String WEBSITE_ZIP_END = "&country=US";

    public static void main(String[]args)
    {
        Scanner reader = new Scanner(System.in);
        System.out.println("Type a 5 digit zip code or city/town");
        String input = reader.nextLine();

        NewsSearch search = new NewsSearch();
        search.checkNews(input);
        reader.close();
    }

    public void checkNews(String s)
    {
        boolean zip = true;
        boolean converted = false;
        String code = "";
        String searchFormated = "";

        for(int i = 0; i < s.length(); i++)//checks to see if zip code
        {
            if(s.charAt(i) > 57 || s.charAt(i) < 48)
            {
                zip = false;
                break;
            }
        }

        if(zip)
        {
            searchFormated += WEBSITE_ZIP_START;
            for(int i = 0; i < s.length(); i++)
            {
                searchFormated += s.charAt(i);
            }
            searchFormated += WEBSITE_ZIP_END;//use newly formed URL to search for the actual city name
            String findIndex = "</small></td><td>";
            String temp = s;
            s = zipToPlace(findIndex, searchFormated);
            code = temp;
            System.out.println(s);
            converted = true;
        }
```

```java
54            if(!zip || converted)//if place isn't a zip code
55            {
56                searchFormated = WEBSITE_PLACE;
57                for(int i = 0; i < s.length(); i++)
58                {
59                    if(s.charAt(i) == ' ')
60                    {
61                        searchFormated += "%20";
62                    }
63                    else
64                    {
65                        searchFormated += s.charAt(i);
66                    }
67                }
68                System.out.println(searchFormated);
69            }
70            placeToArticle(searchFormated, s, code, zip);
71        }
72
73        public void printTitles(boolean z, String s, String code)
74        {
75            if(title1.equals(""))
76            {
77                System.out.println("There is no news about " + s);
78                System.exit(0);
79            }
80            if(z)
81            {
82                System.out.println("News about " + code + "/" + s + ":");
83            }
84
85            else
86            {
87                System.out.println("News about " + s + ":");
88            }
89            System.out.println(title1);
90            System.out.println(title2);
91            System.out.println(title3);
92        }
93
94        public void placeToArticle(String searchFormated, String s, String code, boolean zip)
95        {
96            try
97            {
98                URL newsPage = new URL("https://" + searchFormated);
99                URLConnection yc = newsPage.openConnection();
100                BufferedReader in = new BufferedReader(new InputStreamReader(yc.getInputStream()));
101
102                String inputLine;
103                String line = "";
104
105                while ((inputLine = in.readLine()) != null)
106                {
107                    line += inputLine;
108                }
109
```

```java
110              in.close();
111
112              String indexTitle = "pos=";
113              int index = 750000;
114              int titleCounter = 1;
115          while(index < line.length() && titleCounter <= 3)
116          {
117              if(index == line.indexOf(indexTitle + titleCounter))
118              {
119                  index += 7;
120                  boolean added = false;
121                  while(line.charAt(index) != '<')
122                  {
123                      if(titleCounter == 1)
124                      {
125                          title1 += line.charAt(index);
126                          added = true;
127                      }
128                      else if(titleCounter == 2)
129                      {
130                          title2 += line.charAt(index);
131                          added = true;
132                      }
133                      else if(titleCounter == 3)
134                      {
135                          title3 += line.charAt(index);
136                          added = true;
137                      }
138                      index++;
139                  }
140                  if(added)
141                  {
142                      titleCounter++;
143                  }
144              }
145              index++;
146          }
147          printTitles(zip, s, code);
148      }
149      catch(FileNotFoundException ex)
150      {
151          System.out.println("unknown");
152          System.exit(1);
153      }
154
155      catch(MalformedURLException e)
156      {
157          System.out.println("badly formed url exception occurred");
158          System.exit(1);
159      }
160
161      catch(IOException e)
162      {
163          System.out.println("IO exception occurred");
164          System.exit(1);
165      }
```

```java
166        }
167
168      public String zipToPlace(String key, String website)
169      {
170          String inputLine;
171          String line = "";
172          String place = "";
173          int index = 0;
174          try
175          {
176                  URL site = new URL(website);
177                  URLConnection yc = site.openConnection();
178                  BufferedReader in = new BufferedReader(new InputStreamReader(yc.getInputStream()));
179                  while ((inputLine = in.readLine()) != null)
180                  {
181                      line+=inputLine;
182              }
183                  in.close();
184          }
185          catch(FileNotFoundException ex)
186          {
187                  System.out.println("unknown - zip to place");
188              System.exit(1);
189              return "unknown";
190          }
191
192          catch(MalformedURLException e)
193          {
194              System.out.println("badly formed url exception occurred - zip to place");
195              System.exit(1);
196              return "badly formed url exception occurred";
197          }
198
199          catch(IOException e)
200          {
201              System.out.println("IO exception occurred - zip to place");
202              System.exit(1);
203              return "IO exception occured";
204          }
205          while(index < line.length())
206          {
207              if(index == line.indexOf(key))
208                  {
209                      for(int i = 0; line.charAt(index + 17 + i) != '<'; i++)
210                      {
211                          place += line.charAt(index + 17 + i);
212                      }
213                      return place;
214                  }
215              index++;
216          }
217          return "City not found";
218      }
219  }
```

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