```java
 1 package ctrl.api;
 2
 3 import java.io.IOException;
23
24 /**
25  * Servlet implementation class Product
26  */
27 @WebServlet("/Api/Product")
28 public class Product extends HttpServlet {
29     private static final long serialVersionUID = 1L;
30
31     /**
32      * @see HttpServlet#HttpServlet()
33      */
34     public Product() {
35         super();
36         // TODO Auto-generated constructor stub
37     }
38
39     /**
40      * @see HttpServlet#doGet(HttpServletRequest request,
  HttpServletResponse response)
41      */
42     protected void doGet(HttpServletRequest request,
  HttpServletResponse response) throws ServletException, IOException
  {
43         response.setContentType("application/json");
44         response.setCharacterEncoding("utf-8");
45         response.addHeader("Access-Control-Allow-Origin", "*");
46
47         PrintWriter out = response.getWriter();
48         JsonObject json = new JsonObject();
49         JsonElement resultJson;
50         Model model = Model.getInstance();
51
52         String num = request.getParameter("num");
53         String cid = request.getParameter("cid");
54         String limit = request.getParameter("limit");
55         String byCat = request.getParameter("byCat");
56
57         try {
58             if (byCat != null) {
59                 if (byCat.toLowerCase().equals("name")) {
60                     Map<String, List<Item>> result =
```

```java
model.getCatNameWithFoods();
61                    resultJson = new Gson().toJsonTree(result);
62                } else {
63                    Map<Category, List<Item>> result =
model.getCatsWithFoods();
64
65                    resultJson = new Gson().toJsonTree(result);
66                }
67            } else {
68                List<Item> result = model.getFoods();
69
70                if (num != null)
71                {
72                    result = model.getFoodsBy("num", num, false);
73                }
74                else if (cid != null)
75                {
76                    result = model.getFoodsBy("cid", cid, false);
77                }
78
79                if (limit != null) {
80                    int l = Integer.parseInt(limit);
81                    result = result.subList(0, l);
82                }
83                resultJson = new Gson().toJsonTree(result);
84            }
85
86        json.add("data", resultJson);
87        json.addProperty("status", 1);
88    } catch (Exception e) {
89        json.addProperty("status", 0);
90        json.addProperty("data", e.getMessage());
91    }
92
93    out.print(json.toString());
94    }
95
96    /**
97     * @see HttpServlet#doPost(HttpServletRequest request,
HttpServletResponse response)
98     */
99    protected void doPost(HttpServletRequest request,
HttpServletResponse response) throws ServletException, IOException
{
```

```
100            // TODO Auto-generated method stub
101         doGet(request, response);
102     }
103
104 }
105
```