

# Assignment 1

## Team Battle Chips (CSE2 56)

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### 1.1

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Below is a copy of the terminal interaction with the [www.weer.nl](http://www.weer.nl) server. Text highlighted in gray is the input typed into the console.

```
zbook@Tobro-ZBook:~$ telnet weer.nl 80
Trying 80.92.65.53...
Connected to weer.nl.
Escape character is '^]'.
HEAD / HTTP/1.1
host:weer.nl

HTTP/1.1 301 Moved Permanently
Date: Fri, 16 Nov 2018 13:59:11 GMT
Server: Apache
Status: 301 Moved Permanently
Location: http://www.weer.nl/
Content-Type: text/html; charset=UTF-8
```

Connection closed by foreign host.

```
zbook@Tobro-ZBook:~$ telnet www.weer.nl 80
Trying 52.49.205.192...
Connected to b2cwebsite-live-lb-960116390.eu-west-1.elb.amazonaws.com.
Escape character is '^]'.
HEAD / HTTP/1.1
host:www.weer.nl

HTTP/1.1 200 OK
Age: 260
Cache-Control: max-age=600
Content-Type: text/html; charset=utf-8
Date: Fri, 16 Nov 2018 13:55:38 GMT
Server: nginx/1.12.0
Vary: Accept-Encoding
Via: 1.1 varnish-v4
X-Cache: HIT
X-Powered-By: PHP/5.5.26
X-Varnish: 997703983 998247972
Connection: keep-alive
```

```
GET / HTTP/1.1
host:www.weer.nl

HTTP/1.1 200 OK
Accept-Ranges: bytes
Age: 296
Cache-Control: max-age=600
Content-Type: text/html; charset=utf-8
Date: Fri, 16 Nov 2018 13:55:38 GMT
Server: nginx/1.12.0
Vary: Accept-Encoding
Via: 1.1 varnish-v4
```

```
X-Cache: HIT
X-Powered-By: PHP/5.5.26
X-Varnish: 997922388 998247972
transfer-encoding: chunked
Connection: keep-alive
```

```
3186
<!DOCTYPE html>
<html lang="nl">
<head>
...
```

```
GET /radar/ HTTP/1.1
host:www.weer.nl
```

```
HTTP/1.1 200 OK
Accept-Ranges: bytes
Age: 0
Cache-Control: max-age=600
Content-Type: text/html; charset=utf-8
Date: Fri, 16 Nov 2018 14:03:44 GMT
Server: nginx/1.12.0
Vary: Accept-Encoding
Via: 1.1 varnish-v4
X-Cache: MISS
X-Powered-By: PHP/5.5.26
X-Varnish: 966024039 966024040
transfer-encoding: chunked
Connection: keep-alive
```

```
f97
<!DOCTYPE html>
<html lang="nl">
<head>
...
```

## 1.2

---

The content of the html-code that is received in the final request to the server corresponds with the site with the exception of the elements that require a live connection with the server (e.g. the actual map with weather information is replaced with a placeholder image).

## 1.3

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The X\_Cache tag is used by the server to indicate if the content was coming from a cache server ("HIT") or not ("MISS"). Since "MISS" is reported the information is coming directly from the main server.

## 1.4

---

The Cache-Control directive "max-age=600" specifies that the maximum amount of time the resource will be considered fresh is 600 seconds. The 600 seconds count relative to the time of the request.

## 2.1

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Below is the terminal interaction with the server.

```

zbook@Tobro-ZBook:~$ telnet httpbin.org 80
Trying 52.45.111.123...
Connected to httpbin.org.
Escape character is '^]'.
PUT /put HTTP/1.1
host:httpbin.org
Content-type:text/plain
Content-length:12

Hello World!
HTTP/1.1 200 OK
Connection: keep-alive
Server: gunicorn/19.9.0
Date: Fri, 16 Nov 2018 14:19:34 GMT
Content-Type: application/json
Content-Length: 296
Access-Control-Allow-Origin: *
Access-Control-Allow-Credentials: true
Via: 1.1 vegur

{
  "args": {},
  "data": "Hello World!",
  "files": {},
  "form": {},
  "headers": {
    "Connection": "close",
    "Content-Length": "12",
    "Content-Type": "text/plain",
    "Host": "httpbin.org"
  },
  "json": null,
  "origin": "83.85.38.153",
  "url": "http://httpbin.org/put"
}

```

When specifying the wrong number of characters (13 instead of 12) the server pads the response with additional `\r` characters, as can be seen from below:

```

PUT /put HTTP/1.1
host:httpbin.org
Content-type:text/plain
Content-length:13

Hello World!
HTTP/1.1 200 OK
Connection: keep-alive
Server: gunicorn/19.9.0
Date: Fri, 16 Nov 2018 14:22:36 GMT
Content-Type: application/json
Content-Length: 298
Access-Control-Allow-Origin: *
Access-Control-Allow-Credentials: true
Via: 1.1 vegur

{
  "args": {},
  "data": "Hello World!\r",
  "files": {},
  "form": {},
  "headers": {
    "Connection": "close",
    "Content-Length": "13",
    "Content-Type": "text/plain",
    "Host": "httpbin.org"
  },
  "json": null,

```

```
    "origin": "83.85.38.153",
    "url": "http://httpbin.org/put"
}
```

When specifying a too low number of characters (11 instead of 12) the server truncates the text:

```
PUT /put HTTP/1.1
host:httpbin.org
Content-type:text/plain
Content-length:11

Hello, World!
HTTP/1.1 200 OK
Connection: keep-alive
Server: gunicorn/19.9.0
Date: Fri, 16 Nov 2018 14:25:43 GMT
Content-Type: application/json
Content-Length: 295
Access-Control-Allow-Origin: *
Access-Control-Allow-Credentials: true
Via: 1.1 vegur

{
  "args": {},
  "data": "Hello, Worl",
  "files": {},
  "form": {},
  "headers": {
    "Connection": "close",
    "Content-Length": "11",
    "Content-Type": "text/plain",
    "Host": "httpbin.org"
  },
}
```

## 3.1

---

After logging in to the page and reloading, the browser does not ask for username and password again.

## 3.2

---

Please refer to the text below for a view on the terminal interaction with the server:

```
zbook@Tobro-ZBook:~$ telnet httpbin.org 80
Trying 52.72.251.164...
Connected to httpbin.org.
Escape character is '^]'.
HEAD /basic-auth/user/passwd HTTP/1.1
host:httpbin.org

HTTP/1.1 401 UNAUTHORIZED
Connection: keep-alive
Server: gunicorn/19.9.0
Date: Fri, 16 Nov 2018 14:30:05 GMT
Www-Authenticate: Basic realm="Fake Realm"
Access-Control-Allow-Origin: *
Access-Control-Allow-Credentials: true
Content-Length: 0
Via: 1.1 vegur

===

zbook@Tobro-ZBook:~$ telnet httpbin.org 80
Trying 52.86.186.182...
```

```
Connected to httpbin.org.  
Escape character is '^]'.  
HEAD /basic-auth/user/passwd HTTP/1.1  
host:httpbin.org  
Authorization: Basic dXNlcjpwYXNzd2Q=
```

```
HTTP/1.1 200 OK  
Connection: keep-alive  
Server: gunicorn/19.9.0  
Date: Fri, 16 Nov 2018 14:34:35 GMT  
Content-Type: application/json  
Content-Length: 47  
Access-Control-Allow-Origin: *  
Access-Control-Allow-Credentials: true  
Via: 1.1 vegur
```

===

```
zbook@Tobro-ZBook:~$ telnet httpbin.org 80  
Trying 52.204.188.97...  
Connected to httpbin.org.  
Escape character is '^]'.  
HEAD /basic-auth/user/passwd HTTP/1.1  
host:httpbin.org
```

```
HTTP/1.1 401 UNAUTHORIZED  
Connection: keep-alive  
Server: gunicorn/19.9.0  
Date: Fri, 16 Nov 2018 14:35:53 GMT  
Www-Authenticate: Basic realm="Fake Realm"  
Access-Control-Allow-Origin: *  
Access-Control-Allow-Credentials: true  
Content-Length: 0  
Via: 1.1 vegur
```

The behavior is not the same as the server rejects the connection without the user name and password. Reason for that is that HTTP requires username+password to be provided with each HTTP request whereas the browser hides this from the end-user.

## 4.1

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Our team will implement the Battle Ships game

## 4.2

---

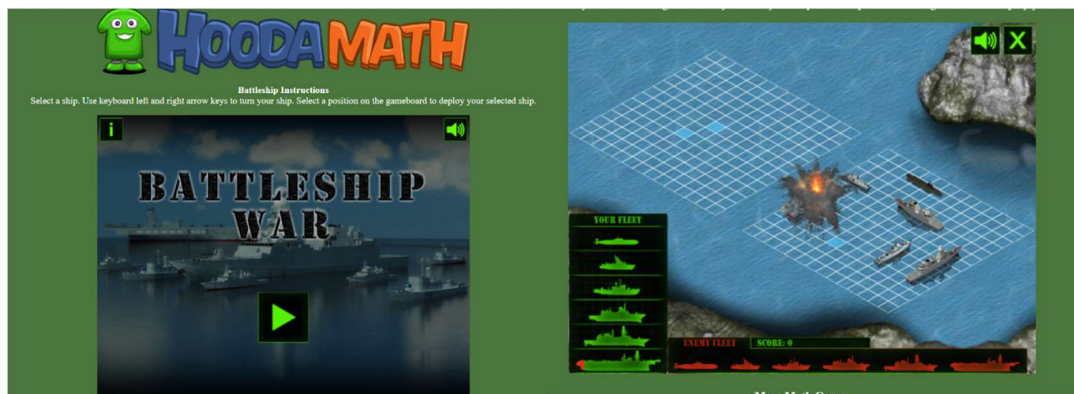
Example 1: <https://boomboomboat.com>



Good: clean game interface with clear intentions

Bad: splash screen is fully text-based and, in combination with the creative site name, the intention of the app is not immediately clear.

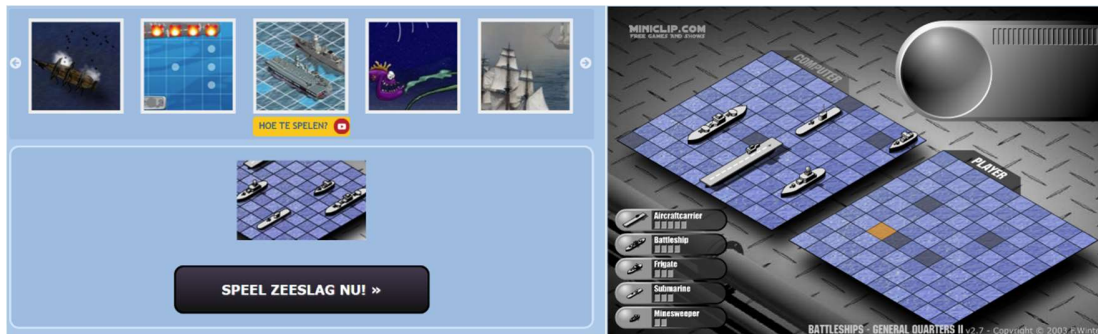
Example 2: <http://www.hoodamath.com/mobile/games/app/battleship.html>



Good: graphically very rich game

Bad: the screen where user has to enter his moves is different from the visualization above creating a chaotic user experience

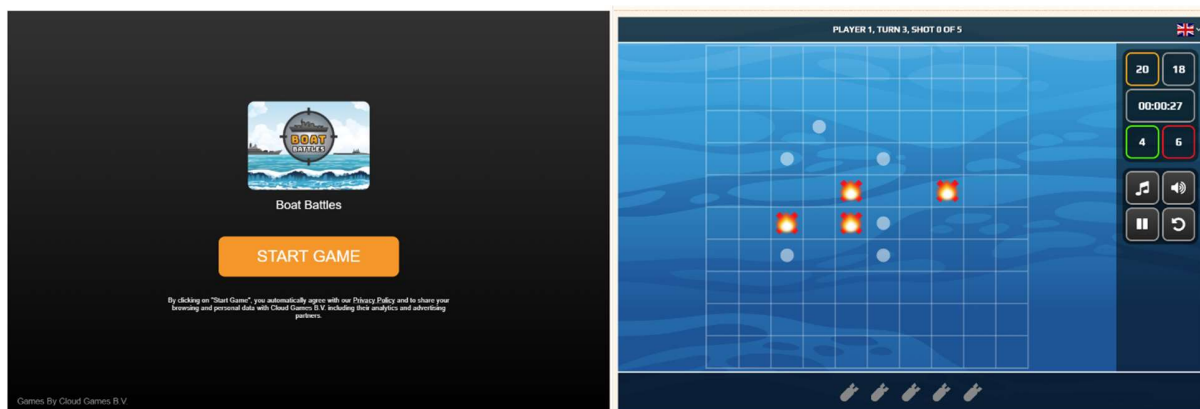
Example 3: <http://www.speeileiland.nl/zeeslag.htm>



Good: graphically very rich game

Bad: requires a flash-plugin in the browser

Example 4: <https://www.1001spelletjes.nl/spellen/zeeslag.html>



Good: graphically very rich game, interesting take on the rules (each player gets to do 5 shots in each turn, rather than taking turns firing a single shot)

Bad: requires a flash-plugin in the browser, laced with advertisements, site does not work if adblocker is active

## 4.3

### *Positive features to include*

- A clean and simple user interface without too many options: in game screen we will only include a button for “forfeit game” and for “full screen”
- Preferably a graphically rich interface but this is likely going to be limited due to time constraints
- Quick click-through to start a game with random set-up instead of tedious/slow set-up procedure

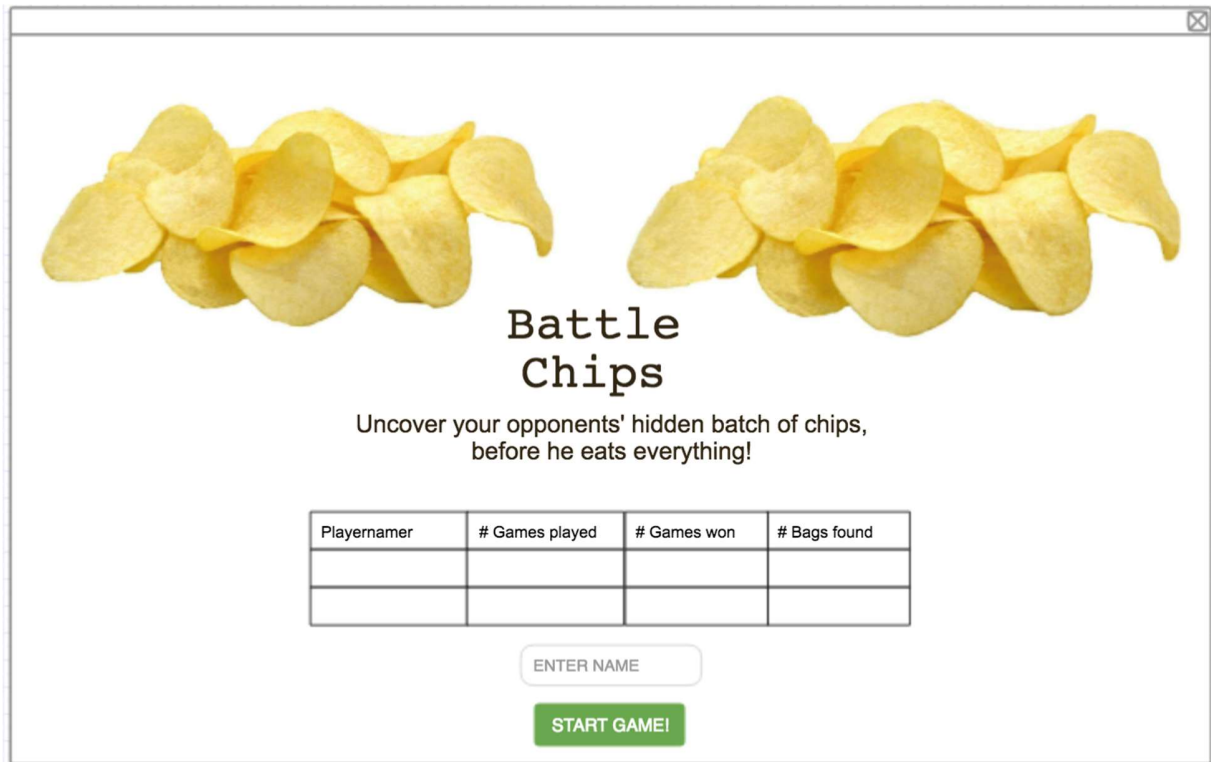
### *Negative features to avoid*

- No advertisements that delay/block the user experience
- Based on standard Javascript – no need for additional browser plug-ins

- A crisp splash screen without too much text

## 5.1

Splash screen design:





5.2

Battle Chips

Adversary

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										


Player

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Adversary	Name
Player	Name

PLAY FULL SCREEN

FORFEIT GAME



5.3

Done

6.

Submitted in separate .zip file