```
<?php
 2
    /**
3
     * This class provides functions to deal with the database.
4
5
 6
     class Database
7
8
         // private variables
9
         private $host; # hostname
10
         private $db; # name of database
11
12
         private $user; # name of user
         private $pwd; # password of user. Can be set via XAMMP
13
14
15
         private $con; # Connection
         private $port = 3306; # default port for MySQL (XAMPP control panel)
16
17
         /**
18
19
         * Initialize with parameters to connect to the database
20
21
         function construct($host, $db, $user, $pwd, $port = 3306, $autoconnect = true)
22
23
             $this->host = $host;
24
             this->db = db;
25
             $this->user = $user;
26
             $this->pwd = $pwd;
27
             $this->port = $port;
28
             if($autoconnect)
29
30
                 $this->open();
31
32
         }
33
         /**
34
35
         * Connect to db
36
37
         function open()
38
             $this->con = new mysqli($this->host, $this->db, $this->user, $this->pwd,
39
             $this->port);
40
         /**
41
42
         * Insert statement
43
         function insert()
44
45
             if ( empty( $table ) || empty( $data ) )
46
47
48
                 return false;
49
             // Connect to the database
50
51
             $db = $this->open();
52
53
             // Cast $data and $format to arrays
54
             $data = (array) $data;
55
             $format = (array) $format;
56
57
             // Build format string
58
             $format = implode('', $format);
59
             $format = str replace('%', '', $format);
60
             list( $fields, $placeholders, $values ) = $this->prep_query($data);
61
62
             // Prepend $format onto $values
63
64
             array unshift($values, $format);
65
66
             // Prepary our query for binding
             $stmt = $db->prepare("INSERT INTO {$table} ({$fields}) VALUES
67
             ({$placeholders})");
68
69
             // Dynamically bind values
70
             call_user_func_array( array( $stmt, 'bind_param'),
```

```
$this->ref values($values));
 71
 72
              // Execute the query
 73
              $stmt->execute();
 74
 75
              // Check for successful insertion
 76
              if ( $stmt->affected rows ) {
 77
                  return true;
 78
 79
 80
              return false;
 81
          }
 82
          /**
 83
 84
          * Execute your query
          */
 85
 86
          function query( $query )
 87
 88
              return $this->con->query( $query ); # &query is the sql statement
 89
 90
 91
          /**
 92
           * Close connection
 93
 94
          function close()
 95
 96
              $this->con->close();
 97
 98
 99
          private function prep query($data, $type='insert')
100
101
              // Instantiate $fields and $placeholders for looping
102
              $fields = '';
103
              $placeholders = '';
104
              $values = array();
105
106
              // Loop through $data and build $fields, $placeholders, and $values
107
              foreach ( $data as $field => $value )
108
                  $fields .= "{$field},";
109
                  $values[] = $value;
110
111
                  if ( $type == 'update')
112
113
114
                       $placeholders .= $field . '=?,';
115
116
                  else
117
118
                       $placeholders .= '?,';
119
120
121
              // Normalize $fields and $placeholders for inserting
122
              $fields = substr($fields, 0, -1);
123
              $placeholders = substr($placeholders, 0, -1);
124
              return array( $fields, $placeholders, $values );
125
126
127
128
      ?>
```