

# Search Engine Tool

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Search by keyword or n

Search

Business

Traditional

PLACEHOLDER PLACEHOLDER PLACEHOLDER

- Accounting
- Program levels offered:  
Bachelor, Minor

View Program Options

PLACEHOLDER PLACEHOLDER PLACEHOLDER

- Biology
- Program levels offered:  
Bachelor, Associate, Minor

View Program Options

PLACEHOLDER PLACEHOLDER PLACEHOLDER

- Computer Science
- Program levels offered:  
Bachelor, Associate, Minor, Certificate

View Program Options

PLACEHOLDER PLACEHOLDER PLACEHOLDER

- Dance
- Program levels offered:  
Bachelor, Minor

View Program Options

# Inheritance, Polymorphism, & Encapsulation

# Inheritance

Prototypal Inheritance  
*Douglas Crockford*

```
function inherit_prototype(child, parent){  
  var copy_parent = Object.create(parent.prototype);  
  copy_parent.constructor = child;  
  child.prototype = copy_parent;  
}
```

# Inheritance (and a lil bit of Polymorphism) continued...

```
function Degree(n, d, f, p){
  this.name = n;
  this.dept = d;
  this.format = f;
  this.programLvl = p;
}

Degree.prototype = {
  constructor: Degree,
  display_degrees: function(_degrees){
    var div = document.getElementById('degrees_grid');
    var html = "";
    var img_path = 'placeholder.png';

    for (var i = 0; i < _degrees.length; i++){
      html += "<div id='" + degrees[i].name.replace(/ /g, '').toLowerCase() + "' class='wrapper'>";
      html += "<div class='frame'><img src='" + img_path + "'/></div>";
      html += "<div class='icons'><img src='" + img_path + "'/><img src='" + img_path + "'/><img src='" + img_path + "'/></div><div>";
      html += "<ul><li>" + _degrees[i].name + "</li>"
      html += "<li>Program levels offered: <br>";
      html += _degrees[i].programLvl.join(', ') + "</li>";
      html += "</ul></div><button id='view_options'>View Program Options</button></div>";
    }

    div.innerHTML = html;
  },
  testing: function(){
    alert(this.name + this.dept + this.format + this.programLvl);
  }
}
```

```
function Description(n, d, f, p){
  Degree.call(this, n, d, f, p);
}

inherit_prototype(Description, Degree);

Description.prototype.display_degrees = function(_degrees){
  alert("This degree is so cool, wow, you'll learn a lot :)");
}
```

# Encapsulation



```
function Filter(d, f){  
    this.keyword_val = "";  
    this.dept_val = d;  
    this.format_val = f;  
}
```

```
filter_keyword:function(){  
    var regex = new RegExp(this.keyword_val, "gi");  
    var array = degrees;  
    var matches = [];  
    for (var j = 0; j < array.length; j++){  
        if (array[j].name.match(regex)) matches.push(array[j].name.replace(  
            / /g, ' ').toLowerCase());  
    }  
    return matches;  
},
```

```
filter_values:function(){  
    var check = false;  
    var matches = [];  
    var keyword = this.filter_keyword();  
    for (var i = 0; i < degrees.length; i++){  
        if ((degrees[i].dept.replace(/ /g, ' ').toLowerCase() === this.  
            dept_val) && (degrees[i].format.toLowerCase() === this.format_val)  
            && (this.keyword_val.length === 0)) {  
            matches.push(degrees[i]);  
        }  
        else if ((degrees[i].dept.replace(/ /g, ' ').toLowerCase() === this.  
            dept_val) && (degrees[i].format.toLowerCase() === this.format_val)  
            && (this.keyword_val.length !== 0)){  
            if (keyword.includes(degrees[i].name.replace(/ /g, ' ').  
                toLowerCase())) matches.push(degrees[i]);  
            else break;  
        }  
    }  
  
    var _degrees = new Degree("", "", "", []);  
    _degrees.display_degrees(matches);  
},
```

Final Thoughts on OOP 

*Have a good Summer!*