JAVASCRIPT FUNDAMENTALS

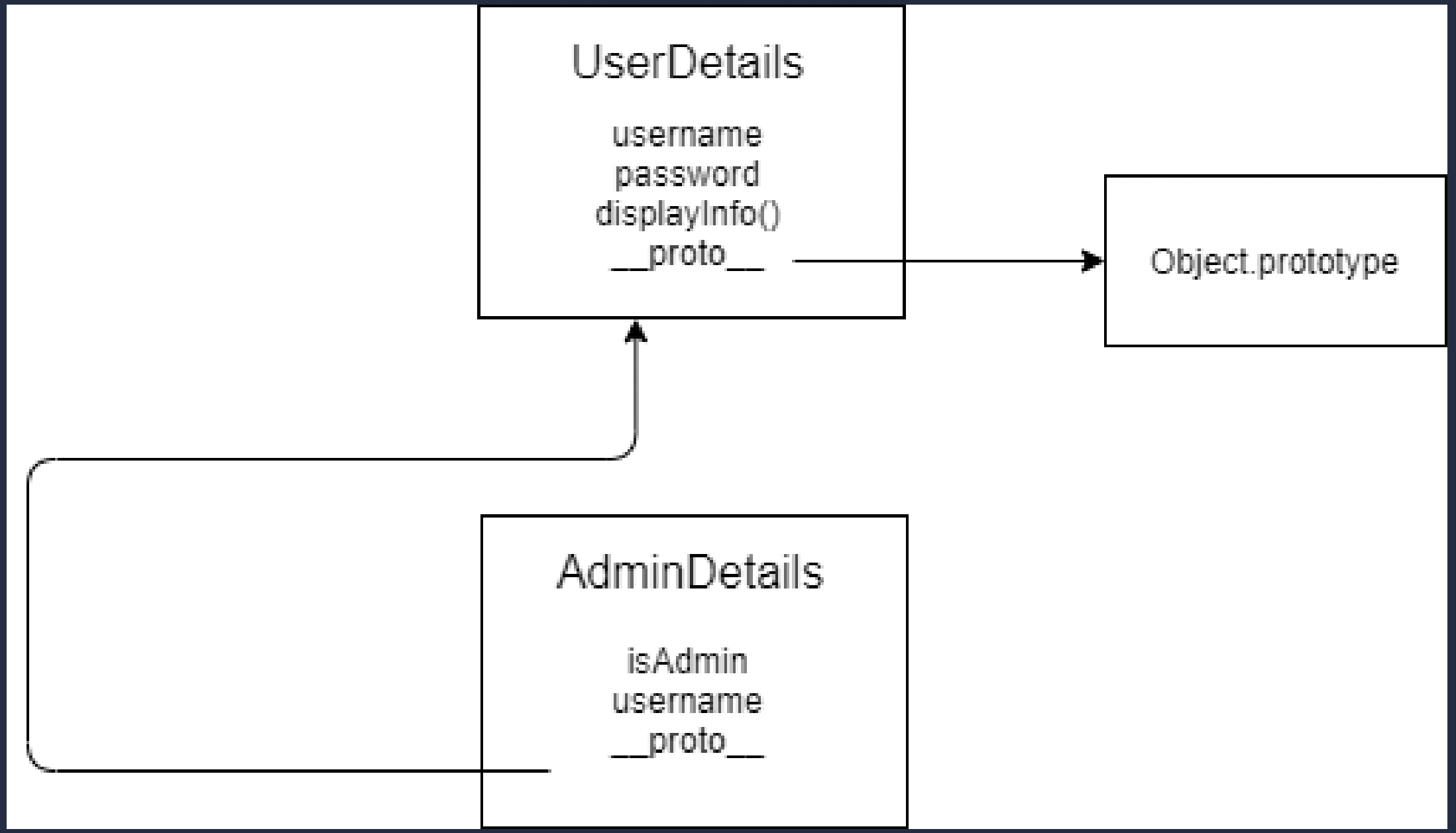
GETTERS AND SETTERS

- Properties bound to functions to get or set values
- Useful when we want to avoid accessing internal properties directly or aggregating the result of multiple properties
- Syntax
- {prop: value, get fnName(){ return this.value}}
- {prop: value, set fnName(value){ this.value = value}}

PROTOTYPES

- Mechanism to inherit features from 1 object to another
- The idea is similar to OOP inheritance but the concepts are different here.
- Links are made between 2 object instances using the __proto__ property in the following way

```
Object.setPrototypeOf(obj2, obj1)
```


UserDetails
username
password
displayInfo()
__proto__
Object.prototype
AdminDetails
isAdmin
username
__proto__

OBJECT CONSTRUCTORS

- Used to create objects following a particular template (similar to class in oop)
- Constructors are functions in which properties are set (using this keyword)
- A new instance of the object can be created using the keyword **new**
- Syntax:
- function FnName(p1, p2){this.prop = p1}
- let instance = new FnName(p1, p2);

OBJECT CONSTRUCTORS

New keyword executes 3 steps

- A new empty object is created
- Sets the constructor property to the prototype to the function
- Calls functionName.call(objName) where the context of this is switched to objName

CLASSES

- Introduced in ECMAScript 2015 (ES6)
- Syntatic sugar over current prototypical inheritance
- Instead of a prototype chain, we can use extends similar to normal OOP

REGULAR EXPRESSIONS

- Patterns used to match character combinations in strings
- Can be either declared using RegExp constructor or directly in string enclosed in //
- Syntax
- Let pattern = new Regexp("abc", "g")
- Or
- Let pattern = "/abc/g"

REGULAR EXPRESSIONS QUANTIFIERS AND ASSETIONS

Special character	Significance
*	Zero or more matches to preceding item
+	One or more matches to preceding item
?	Zero or one match to preceding item
{m.n}	Preceding item match between m and n times
^	Start of the input
$	End of the input

REGULAR EXPRESSIONS GROUPS

Special character	Significance
a|b	Matches either a or b
(a)	Capturing group: Matches a and remembers the match
[abc]	Matches any one of the enclosed characters
[^abc]	Negation: Matches anything not whithin the brackets

REFERENCES

- You don't know JS - Kyle Simpson
- Eloquent Javascript, Marijn Haverbeke