//factory pattern

var id = function(){

this.info = "1182118";

}

var firstname = function(){

this.info = "Christine Joy";

}

var middlename = function(){

this.info = "Cabanilla";

}

var lastname = function (){

this.info = "Paran";

}

var course = function(){

this.info = "BSIT";

}

var gender = function (){

this.info = "Female";

}

var contact = function (){

this.info = "09069338367";

}

var birthdate = function(){

this.info = "12/24/1998";

}

var email = function(){

this.info = "christinejoy.paran@ctu.edu.ph";

}

var Studentinfo = function (){

this.createStudent = function (type){

var student;

if(type === "Student Id"){

student = new id();

}

else if(type === "Firstname"){

student = new firstname();

}

else if(type ==="Middlename"){

student = new middlename();

}

else if(type === "Lastname"){

student = new lastname();

}

else if(type === "Course"){

student = new course();

}

else if(type === "Gender"){

student = new gender();

}

else if(type === "Contact"){

student = new contact();

}

else if(type === "Birthdate"){

student = new birthdate();

}

else if(type === "Email")

{

student = new email ();

}

student.type = type;

student.say = function(){

console.log(this.type + ": " + this.info);

}

return student;

}

}

function displayStudentInfo()

{

var students = [];

var studentInfo = new Studentinfo();

console.log("Factory Pattern in Student Information");

console.log("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

students.push(studentInfo.createStudent("Student Id"));

students.push(studentInfo.createStudent("Firstname"));

students.push(studentInfo.createStudent("Middlename"));

students.push(studentInfo.createStudent("Lastname"));

students.push(studentInfo.createStudent("Course"));

students.push(studentInfo.createStudent("Gender"));

students.push(studentInfo.createStudent("Contact"));

students.push(studentInfo.createStudent("Birthdate"));

students.push(studentInfo.createStudent("Email"));

for (var i = 0, len = students.length; i < len; i++) {

students[i].say();

}

console.log("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

}

displayStudentInfo();

//singleton pattern

var Singleton = (function () {

var instance;

var instance1;

var instance2;

function createInstance() {

var object = new Object("I am Christine Joy Paran");

return object;

}

function createInstance1() {

var object = new Object("I am a 4th Year student");

return object;

}

function createInstance2() {

var object = new Object("A BSIT Student");

return object;

}

return {

getInstance: function () {

if (!instance) {

instance = createInstance();

}

},

getInstance1: function(){

if (!instance1) {

instance1 = createInstance1();

}

return instance1;

},

getInstance2: function(){

if (!instance2) {

instance2 = createInstance2();

}

return instance2;

}

};

})();

run();

function run() {

var instance1 = Singleton.getInstance();

var instance2 = Singleton.getInstance();

var instance3 = Singleton.getInstance1();

var instance4 = Singleton.getInstance1();

var instance5 = Singleton.getInstance2();

var instance6 = Singleton.getInstance2();

console.log("Singleton Pattern in Student Information");

console.log("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

console.log("Same Student? " + (instance1 === instance2));

console.log("Same Year? " + (instance3 === instance4));

console.log("Same Course? " + (instance5 === instance6));

console.log("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

}

//strategies pattern

var StudentInfo = function () {

this.student = "";

};

StudentInfo.prototype = {

setStrategy: function (student) {

this.student = student;

},

calculate: function (package) {

return this.student.calculate(package);

}

};

var ID=function(){

this.calculate = function(package){

return "1182118";

}

}

var Name = function () {

this.calculate = function (package) {

return "Christine Joy Cabanilla Paran";

}

};

var Course = function(){

this.calculate = function(package){

return "BSIT";

}

}

var Gender = function () {

this.calculate = function (package) {

return "Female";

}

};

var Contact = function () {

this.calculate = function (package) {

return "09069338367";

}

};

var Birthdate = function () {

this.calculate = function (package) {

return "12/24/1998";

}

};

var Email = function () {

this.calculate = function (package) {

return "christinejoy.paran@ctu.edu.ph";

}

};

function displayStudentStratInfo() {

var id = new ID();

var name = new Name();

var gender = new Gender();

var contact = new Contact();

var bday = new Birthdate();

var email = new Email();

var course = new Course();

var info = new StudentInfo();

console.log("Stategy Pattern in Student Information");

console.log("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");

info.setStrategy(id);

console.log("Student Id: " + info.calculate());

info.setStrategy(name);

console.log("Name: " + info.calculate());

info.setStrategy(course);

console.log("Course: " + info.calculate());

info.setStrategy(gender);

console.log("Gender: " + info.calculate());

info.setStrategy(contact);

console.log("Contact: " + info.calculate());

info.setStrategy(bday);

console.log("Birthdate: " + info.calculate());

info.setStrategy(email);

console.log("Email: " + info.calculate());

}

displayStudentStratInfo();