



**University Force Army - ESPE**

**Department of Computer Science**

**Software Engineering Degree**

**Oriented Objects Programming**

**NRC 28434**

**OBJECT MASTER**

**Instructor: Edison Lascano**

**Group 2**

- **MATEO DAVID CEVALLOS PAGUAY**
- **KEVIN ANTHONY CHALAN YAMBERLA**
- **FERNANDO DANIEL CHICAIZA SAMBACHI**
- **PABLO JOSE COLLAGUAZO NAZATE**

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## Definition of Class Project: CreAltiva Studios

- **Class: Clients**

### Attributes

id : int

name : String

email : String

phone : String

address : String

### Operations:

requestAppointment(sessionType : String) : void

confirmAppointment() : boolean

cancelAppointment() : boolean

- **Class: Sessions**

### Attributes:

id : int

type : String ("studio", "event")

date : Date

time : Time

location : String

confirmed : boolean

### Operations:

createSession(client : Client) : boolean

updateSession(date : Date, time : Time) : boolean

deleteSession() : boolean

- **Class: Calendar**

### Attributes:

calendarId : String

events : List

owner : String

### Operations:

addEvent(session : Session) : boolean

removeEvent(sessionId : int) : boolean

getAvailableSlots(date : Date) : List

syncGoogleCalendar() : boolean

- **Class: Events**

### Attributes:

type : String ("weddings", "baptism")

date : Date

time : Time

location : String

photographTeam : Photographers

price : float

confirmed : boolean

### Operations:

updateCalendarEvents(type : String): Date

registerPhotographyTeam(price; float) :  
photographTeam

calculatePrice() : price

- **Class: Photographers**

**Attributes:**

id : String

equipment : photographyEquipment

assistance : boolean

salary: float

**Operations:**

confirmAssistance(date: Date): boolean

calculateSalary(price: float): salary

seeCalendarEvents()

- **Class: Equipments**

**Attributes:**

idEquipment : String

model: String

type: String ("Illumination", "lenses", "cameras")

photographTeam : Photographers

price : float

**Operations:**

lastTimeUsed(date: Date): Date

registerTeamUsing(price: float) :  
photographyTeam

calculatePriceOfUsing() : price

- **Class: Payments (Pagos)**

**Atributos:**

paymentId : int → identificador del pago

client : Client → cliente que realiza el pago

amount : float → monto total

paymentDate : Date → fecha del pago

paymentMethod : String ("cash", "card",  
"transfer") → método de pago

status : String ("pending", "completed",  
"refunded") → estado del pago

**Operaciones:**

processPayment(): boolean → procesa el pago

refundPayment(): boolean → devuelve el pago

generateReceipt(): String → genera un  
comprobante

- **Class: Reports (Reportes)**

**Atributos:**

reportId : int

title : String

creationDate : Date

reportType : String ("sales", "attendance",  
"equipment usage")

data : List

**Operaciones:**

generateReport(type: String): boolean → genera  
un reporte de un tipo específico

exportToPDF(): boolean → exporta el reporte a  
PDF

sendToManager(email: String): boolean → envía  
el reporte al administrador

- **Class: Facture**

**Attributes:**

idFacture : int

client : Cliente

dateEmission: Date

subtotal : float

iva : float

total : float

**Operations**

- **Class: Discount**

**Attributes:**

idPromocion : int

discountPercentage: float

startDate: Date

dateEnd: Date

**Operations:**

applyDiscount (precioBase): float

generateFacture() : boolean

printFacture(): void

sendInvoicebyMail(): boolean

# Visual Paradigm

Client
-id : int -name : String -email : String -phone : String -address : String
+requestAppointment(sessionType : String) : void +confirmAppointment() : boolean +cancelAppointment() : boolean

Session
-id : int -type : String -date : Date -time : Time -location : String -confirmed : boolean
+createSession(client : Client) : boolean +updateSession(date : Date, time : Time) : boolean +deleteSession() : boolean

Calendar
-calendarId : String -events : List -owner : String
+addEvent(session : Session) : boolean +removeEvent(sessionId : int) : boolean +getAvailableSlots(date : Date) : List +syncGoogleCalendar() : boolean

Photographers
-id : String -equipment : photographyEquipment -assistance : boolean -salary : float
+confirmAssistance(date) : boolean +calculateSalary(price) : float +seeCalendarEvents()

Equipments
-idEquipment : String -model : String -type : String -photographTeam : Photographers -price : float
+lastTimeUsed(date) : Date +registerTeamUsing(price) +calculatePriceOfUsing() : price

Events
-type : String -date : Date -time : Time -location : String -photographTeam : Photographers -price : float -confirmed : boolean
+updateCalendarEvents(type) : Date +registerPhotographyTeam(price) : photographTeam +calculatePrice() : price

Payments
<div><div>- paymentId : int</div><div>- client : Client</div><div>- amount : float</div><div>- paymentDate : Date</div><div>- paymentMethod : String</div><div>- status : String</div><div>--</div><div>+ processPayment() : boolean</div><div>+ refundPayment() : boolean</div><div>+ generateReceipt() : String</div></div>

Reports
<div><div>class Reports {</div><div>- reportId : int</div><div>- title : String</div><div>- creationDate : Date</div><div>- reportType : String</div><div>- data : List</div><div>--</div><div>+ generateReport(type : String) : boolean</div><div>+ exportToPDF() : boolean</div><div>+ sendToManager(email : String) : boolean</div></div>

Discount
<div><div>-idPromocion : int</div><div>+discountPercentage : float</div><div>+startDate : Date</div><div>+dateEnd : Date</div></div>
<div><div>+applyDiscount(lowPrice) : float</div></div>

Facture
<div><div>-idFacture : int</div><div>-client : Cliente</div><div>+dataEmission : Date</div><div>+subtotal : float</div><div>+iva : float</div><div>+total : float</div><div>+attribute</div></div>
<div><div>+generateFacture() : boolean</div><div>+printFacture() : void</div><div>+sendInvoiceByEmail() : boolean</div></div>