

@startuml

```
class User {  
    +UserID  
    +Username  
    +Password  
    +Email  
    +PaymentMethods  
    +Age  
    +BlockedStatus  
    +Login()  
    +AddPaymentMethod()  
    +PurchaseTicket()  
    +RequestRefund()  
    +SearchEvents()  
    +TransferTicket()  
    +ViewNotifications()  
}
```

```
class Event {  
    +EventID  
    +EventName  
    +Date  
    +Time  
    +Venue  
    +TicketTypes  
    +Prices  
    +AgeRestriction  
    +CreateEvent()  
    +UpdateEvent()  
    +CancelEvent()  
}
```

```
class Ticket {  
    +TicketID  
    +EventID  
    +UserID  
    +TicketType  
    +SeatNumber  
    +PurchaseDate  
    +Validity  
    +GenerateTicket()  
    +DownloadTicket()  
    +ValidateTicket()  
}
```

```
class Payment {  
    +PaymentID  
    +UserID
```

```
+Amount
+PaymentMethod
+TransactionDate
+ValidatePayment()
+ProcessRefund()
}
```

```
class EventOrganizer {
+EventsManaged
+PromoteEvent()
+ViewParticipants()
+BlockUser()
}
```

```
class Notification {
+NotificationID
+UserID
+Message
+Date
+SendNotification()
+ViewNotification()
}
```

```
class Review {
+ReviewID
+UserID
+EventID
+Rating
+Comment
+SubmitReview()
+ViewReviews()
}
```

```
class Analytics {
+EventID
+NumberOfAttendees
+TicketSales
+UserDemographics
+GenerateReport()
}
```

```
class Authentication {
+UserID
+AuthenticationStatus
+AuthenticateUser()
}
```

```
class SeatSelection {
```

```

+EventID
+SeatMap
+AvailableSeats
+SelectSeat()
+UpdateSeatAvailability()
}

```

User "1" - "0..*" Ticket : has >
 User "1" - "0..*" Notification : receives >
 User "1" - "0..*" Review : writes >
 User "1" - "0..*" Payment : makes >
 User "1" - "1" Authentication : requires >
 User "0..1" -down-> "0..*" EventOrganizer

Event "1" - "0..*" Ticket : includes >
 Event "1" - "0..*" SeatSelection : offers >
 Event "1" - "0..*" Analytics : has >
 EventOrganizer "1" - "0..*" Event : creates >

Ticket "1" - "1" Payment : uses >
 @enduml

