

# Graphical User Interface

# Credit Card Bill Payment GUI

How would you like to pay?

MasterCard

MasterCard

PayPal

Google wallet

VISA

CARDHOLDERS NAME  
James Anthony Gargett

CARD NUMBER  
1234 5678 9123 4567

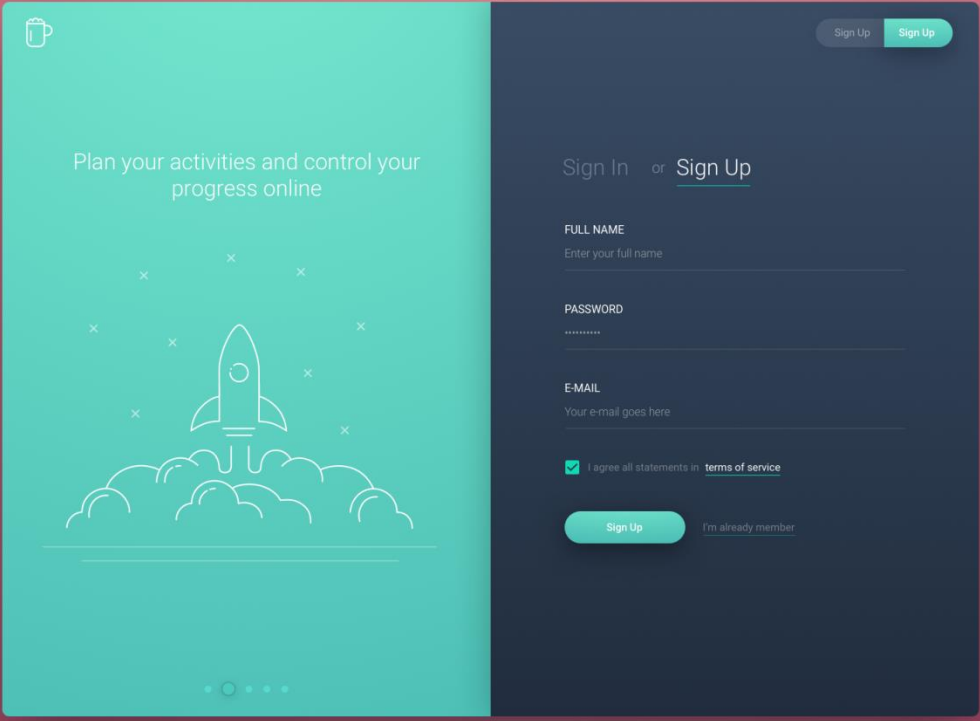
EXPIRATION DATE  
January 1992

CVV/CVC  
123 : 3 or 4 digit code


Save my card details


Pay now

# Online Registration



The image shows a registration form with a teal left panel and a dark blue right panel. The teal panel features a rocket launch illustration and the text 'Plan your activities and control your progress online'. The dark blue panel contains a 'Sign In or Sign Up' header, input fields for 'FULL NAME', 'PASSWORD', and 'E-MAIL', a terms of service checkbox, and 'Sign Up' and 'I'm already member' buttons.

 Plan your activities and control your progress online



Sign Up Sign Up

Sign In or Sign Up

FULL NAME  
Enter your full name

PASSWORD  
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E-MAIL  
Your e-mail goes here

I agree all statements in [terms of service](#)

Sign Up I'm already member

# Interface Design

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**Easy to learn?**

**Easy to use?**

**Easy to understand?**

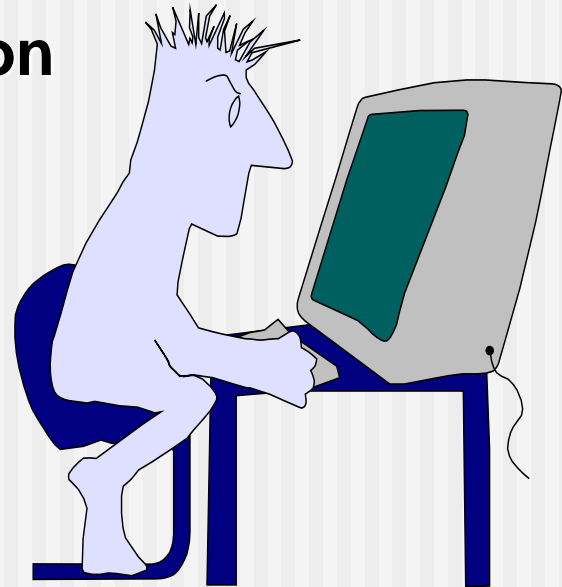


# Interface Design

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## Typical Design Errors

**lack of consistency**  
**too much memorization**  
**no guidance / help**  
**no context sensitivity**  
**poor response**  
**Arcane/unfriendly**



# Golden Rules

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- Place the user in control
- Reduce the user's memory load
- Make the interface consistent

# Place the User in Control

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- Define interaction modes in a way that does not force a user into unnecessary or undesired actions.

# Reduce the User's Memory Load

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- Reduce demand on short-term memory.
- Establish meaningful defaults.
- Define shortcuts that are intuitive.

# Make the Interface Consistent

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- Allow the user to put the current task into a meaningful context.
- Maintain consistency across a family of applications.
- If past interactive models have created user expectations, do not make changes unless there is a compelling reason to do so.

# User Interface Design Models

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- **User model** — a profile of all end users of the system
- **Design model** — a design realization of the user model
- **Mental model (system perception)** — the user's mental image of what the interface is
- **Implementation model** — the interface “look and feel” coupled with supporting information that describe interface syntax and semantics

# Interface Design Steps

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- Using information developed during interface analysis, **define interface objects and actions (operations)**.
- **Define events (user actions)** that will cause the state of the user interface to change. Model this behavior.
- **Depict each interface state** as it will actually look to the end-user.
- **Indicate how the user interprets the state of the system** from information provided through the interface.

# Interface Design Principles

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- **Anticipation**—A WebApp should be designed so that it anticipates the use's next move.
- **Communication**—The interface should communicate the status of any activity initiated by the user
- **Consistency**—The use of navigation controls, menus, icons, and aesthetics (e.g., color, shape, layout)
- **Controlled autonomy**—The interface should facilitate user movement throughout the WebApp, but it should do so in a manner that enforces navigation conventions that have been established for the application.
- **Efficiency**—The design of the WebApp and its interface should optimize the user's work efficiency, not the efficiency of the Web engineer who designs and builds it or the client-server environment that executes it.

# Mapping User Objectives

