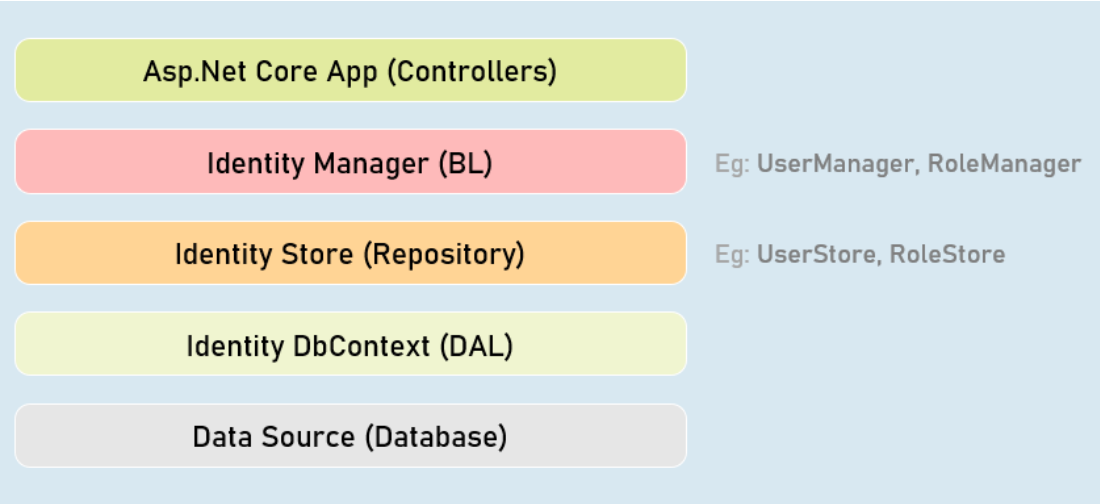
Section Cheat Sheet (PPT)

Introduction to Identity

It is an API that manages users, passwords, profile data, roles, tokens, email confirmation, external logins etc.

It is by default built on top of EntityFrameworkCore; you can also create custom data stores.



IdentityUser<T>

Acts as a base class for ApplicationUser class that acts as model class to store user details.

You can add additional properties to the ApplicationUser class.

Built-in Properties:

1. Id
2. UserName
3. PasswordHash
4. Email
5. PhoneNumber

IdentityRole<T>

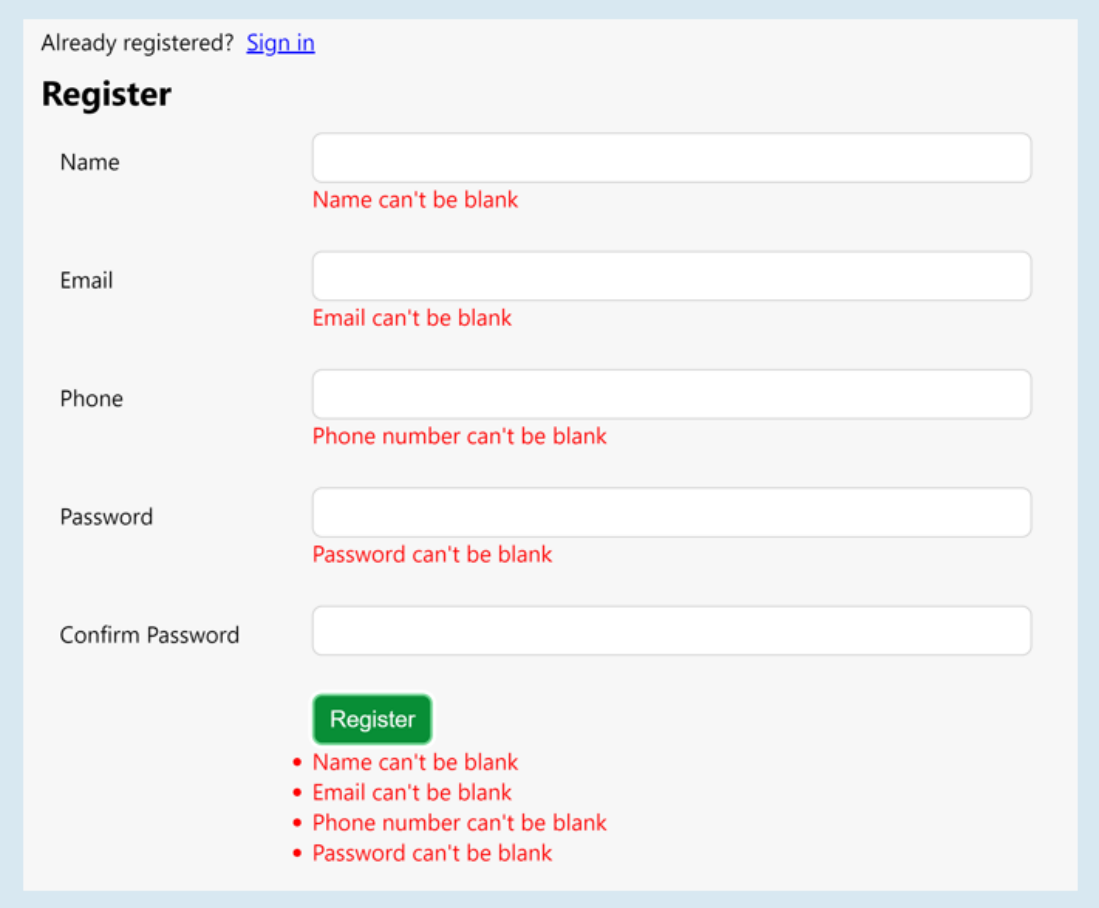
Acts as a base class for ApplicationRole class that acts as model class to store role details. Eg: "admin"

You can add additional properties to the ApplicationRole class.

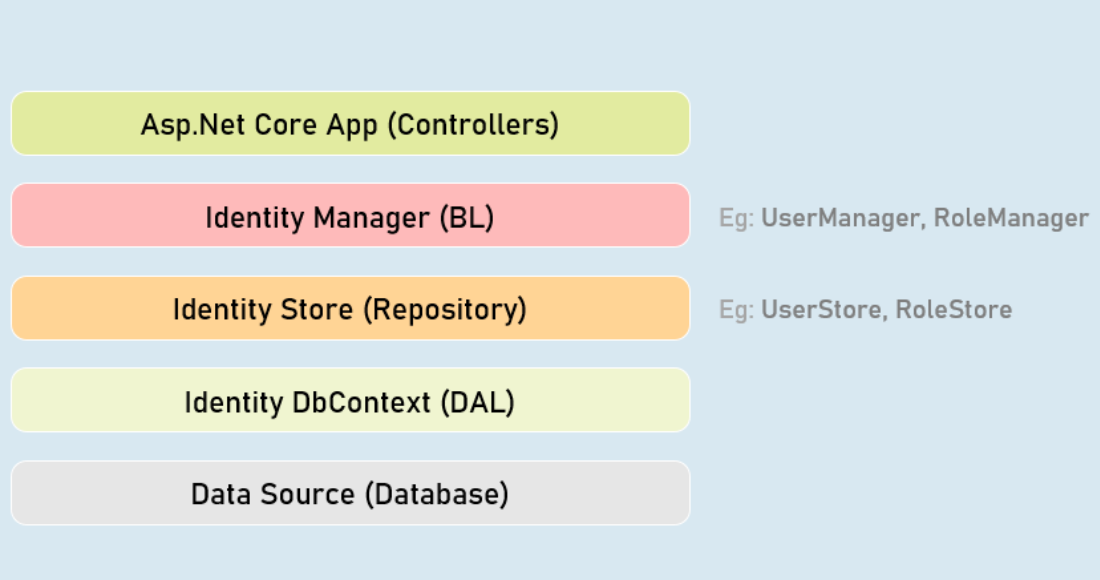
Built-in Properties:

1. Id
2. Name

Register View



Managers



UserManager

Provides business logic methods for managing users.

It provides methods for creating, searching, updating and deleting users.

Methods:

- CreateAsync()
- DeleteAsync()
- UpdateAsync()
- IsInRoleAsync()FindByEmailAsync()
- FindByIdAsync()
- FindByNameAsync()

SignInManager

Provides business logic methods for sign-in and sign-in functionality of the users.

It provides methods for creating, searching, updating and deleting users.

Methods:

SignInAsync()

PasswordSignInAsync()

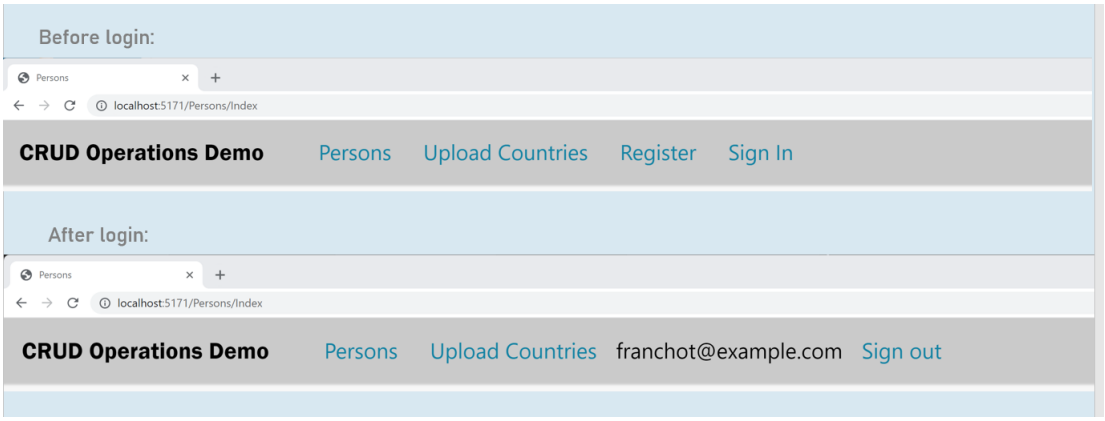
SignOutAsync()

IsSignedIn()

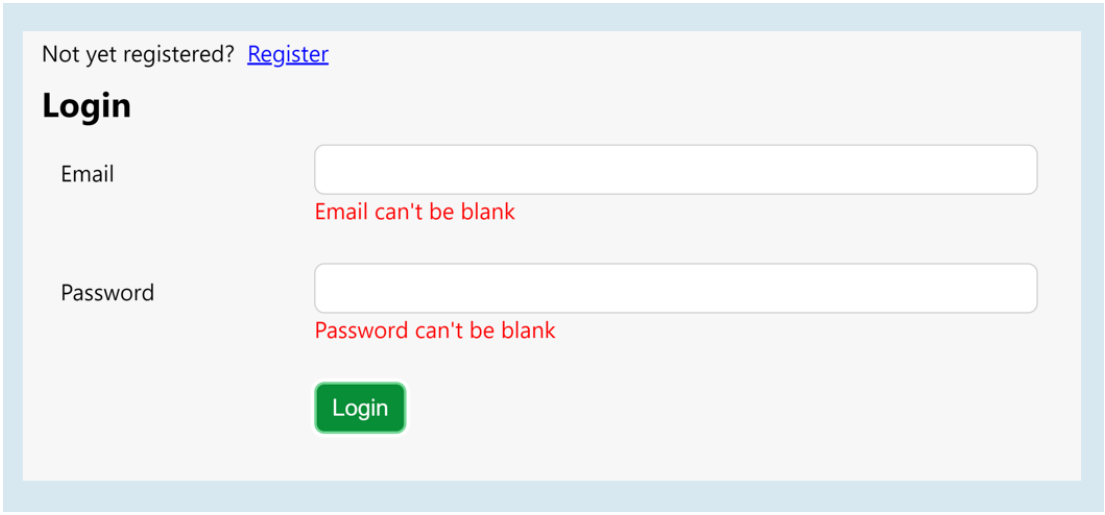
Password Complexity Configuration

```
  services.AddIdentity<ApplicationUser, ApplicationRole>(options => {
    options.Password.RequiredLength = 6; //number of characters required in password
    options.Password.RequireNonAlphanumeric = true; //is non-alphanumeric characters (symbols)
  required in password
    options.Password.RequireUppercase = true; //is at least one upper case character required in password
    options.Password.RequireLowercase = true; //is at least one lower case character required in password
    options.Password.RequireDigit = true; //is at least one digit required in password
    options.Password.RequiredUniqueChars = 1; //number of distinct characters required in password
  })
  .AddEntityFrameworkStores<ApplicationDbContext>()
  .AddDefaultTokenProviders()
  .AddUserStore<UserStore<ApplicationUser, ApplicationRole, ApplicationDbContext, Guid>>()
  .AddRoleStore<RoleStore<ApplicationRole, ApplicationDbContext, Guid>>();
```

Login/Logout Buttons



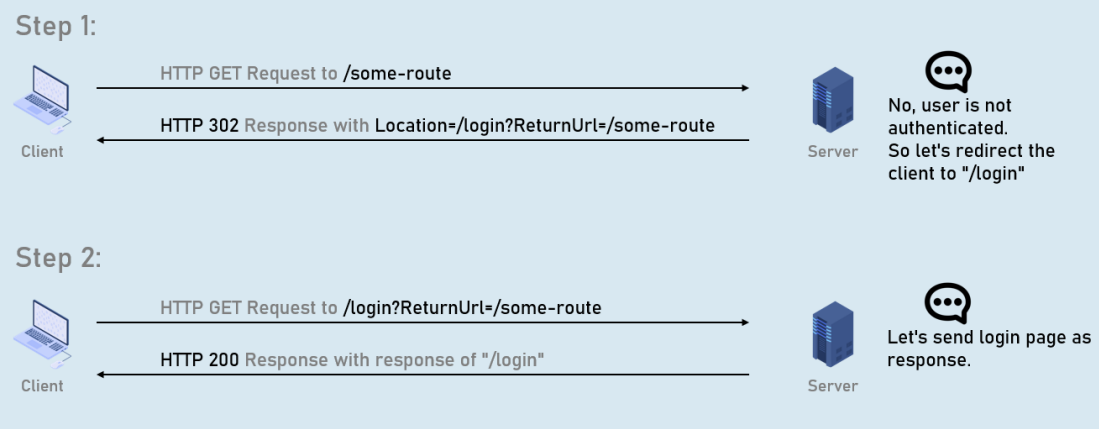
Login View

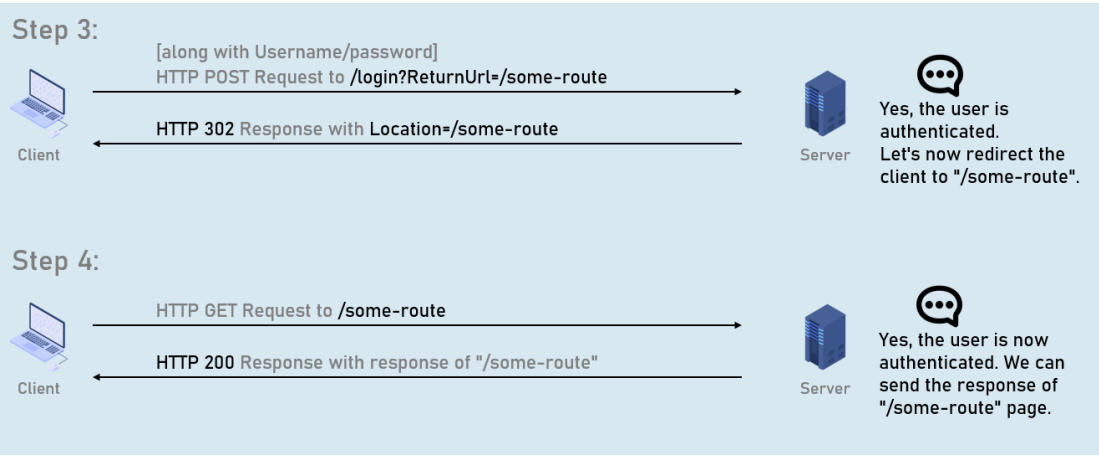


Authorization Policy

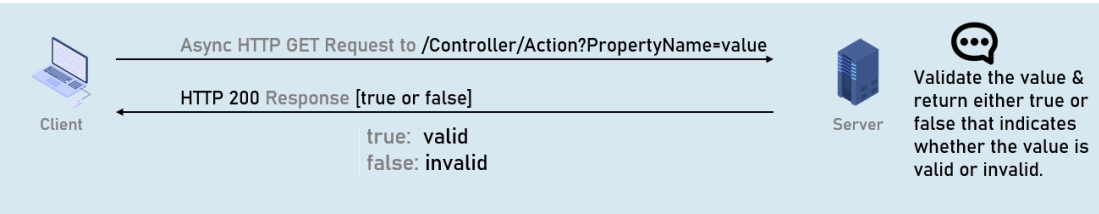
```
1  services.AddAuthorization(options =>
2  {
3    var policy = new AuthorizationPolicyBuilder().RequireAuthenticatedUser().Build();
4    options.FallbackPolicy = policy;
5  });
```

ReturnUrl





Remote Validation



Model class

```
1  public class ModelClassName
2  {
3    [Remote(action: "action name", controller: "controller name",
ErrorMessage = "error message")]
4    public type PropertyName { get; set; }
5  }
```

Conventional Routing

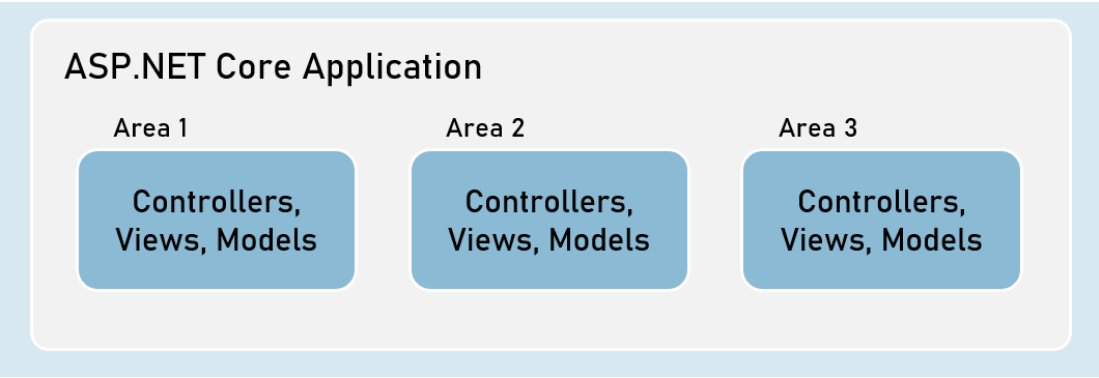
Conventional routing is a type of routing system in asp.net core that defines route templates applied on all controllers in the entire application.

You can override this using attribute routing on a specific action method.

```
endpoints.MapControllerRoute(
  name: "default",
  pattern: "{controller=Persons}/{action=Index}/{id?}"
);
```

Areas

Area is a group of related controllers, views and models that are related to specific module or specific user.

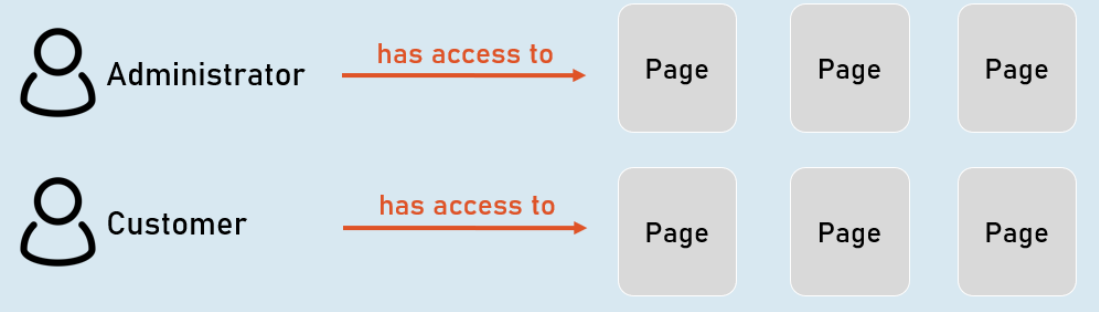


User Roles

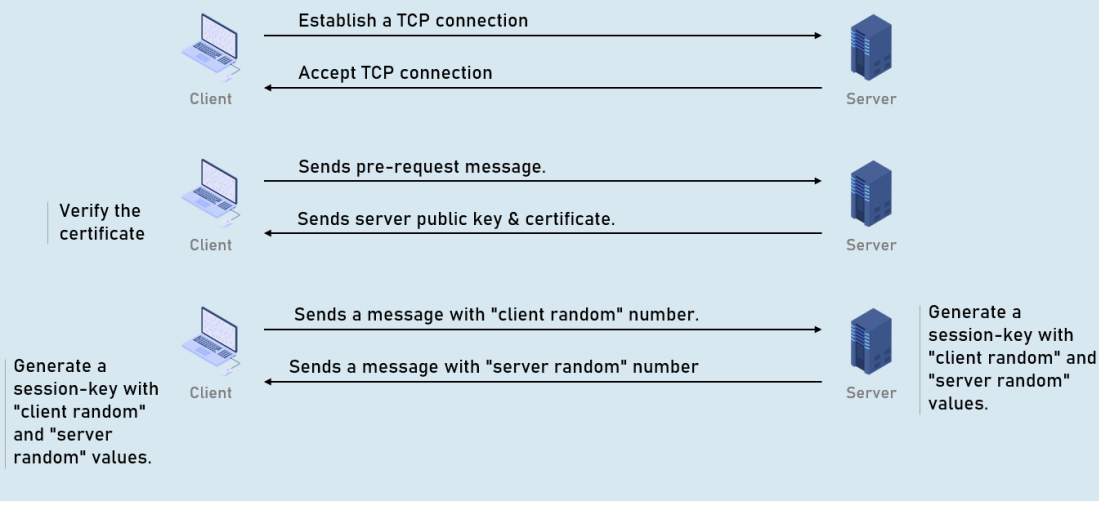
Role Based Authentication

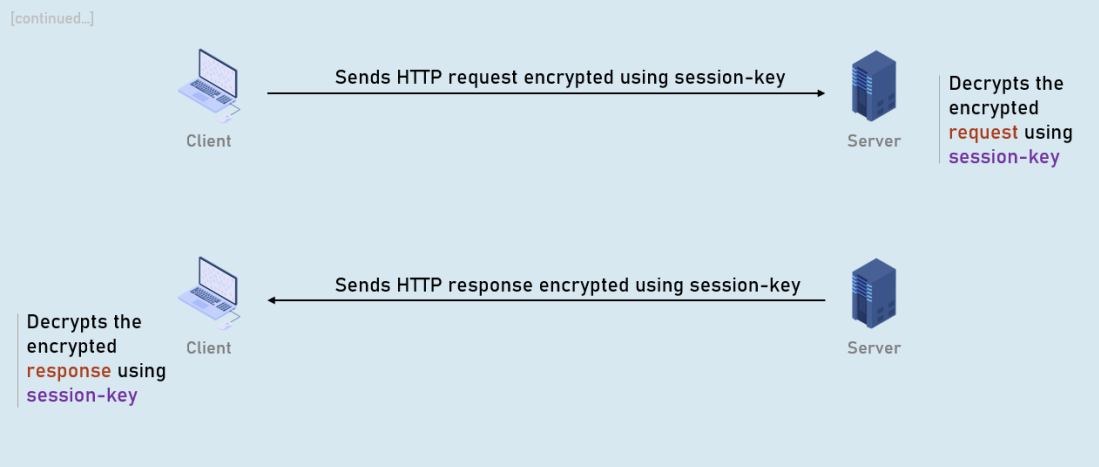
User-role defines type of the user that has access to specific resources of the application.

Examples: Administrator role, Customer role etc.



HTTPS



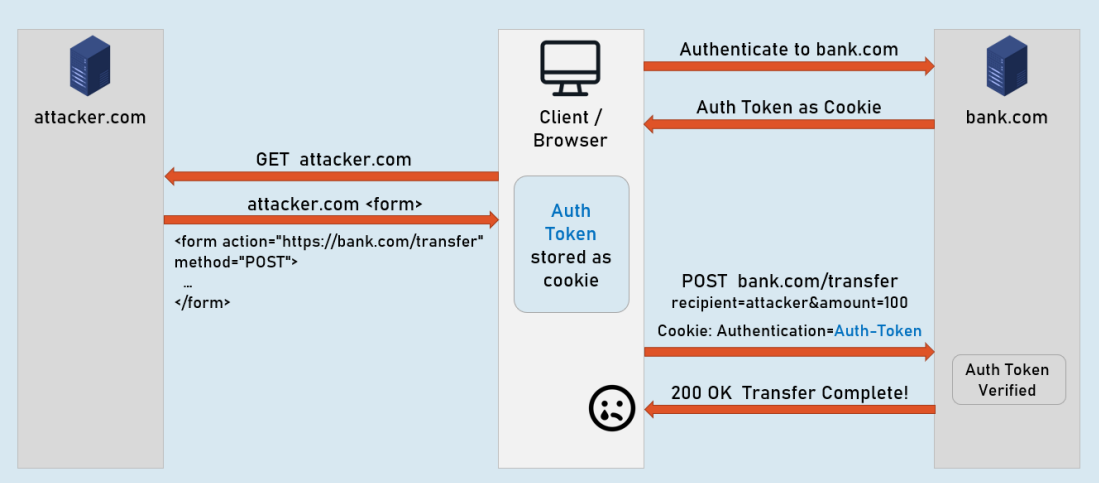


XSRF

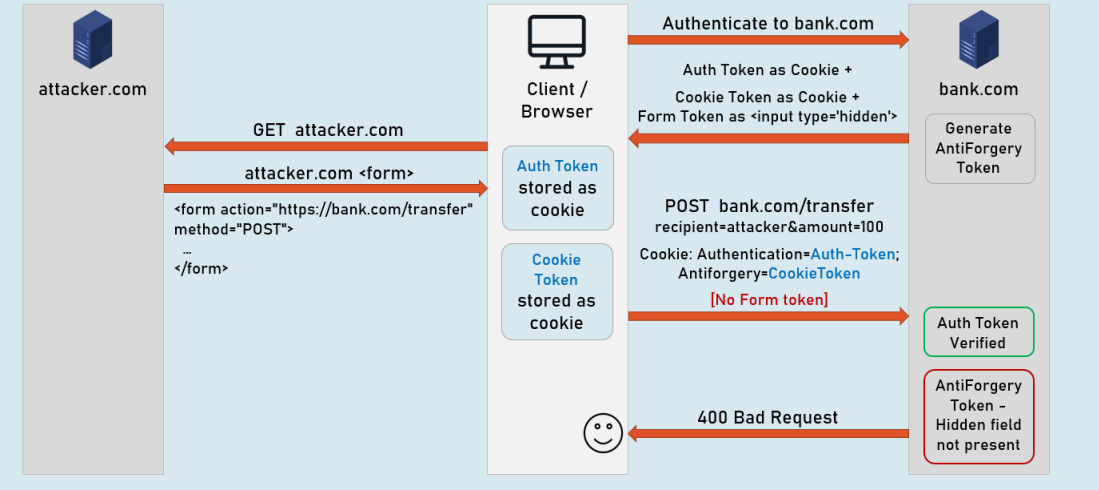
XSRF (Cross Site Request Forgery - CSRF) is a process of making a request to a web server from another domain, using an existing authentication of the same web server.

Eg: attacker.com creates a form that sends malicious request to original.com.

Attacker's request without AntiForgeryToken



Attacker's request



Legit request [No attacker.com]