

Experiment 11

Aim : Program for Creating and using APIs

Code :

ProductsController.cs

```
using Microsoft.AspNetCore.Mvc;
using.AspNetCoreWebAPI.Data;
using.AspNetCoreWebAPI.Models;
namespace.AspNetCoreWebAPI.Controllers
{
    public class ProductsController : ControllerBase
    {
        private readonly ProductRepository _repository = new ProductRepository();
        public IActionResult GetProducts()
        {
            return Ok(_repository.GetAll());
        }
        public IActionResult GetProduct(int id)
        {
            var product = _repository.GetByld(id);
            if (product == null)
            {
                return NotFound();
            }
            return Ok(product);
        }
        public IActionResult AddProduct([FromBody] Product product)
```



```
{
    _repository.Add(product);
    return CreatedAtAction(nameof(GetProduct), new { id = product.Id }, product);
}

public IActionResult UpdateProduct(int id, [FromBody] Product product)
{
    if (id != product.Id)
        return BadRequest();
    var existingProduct = _repository.GetById(id);
    if (existingProduct == null)
        return NotFound();
    _repository.Update(product);
    return NoContent();
}

public IActionResult DeleteProduct(int id)
{
    var product = _repository.GetById(id);
    if (product == null)
        return NotFound();
    _repository.Delete(id);
    return NoContent();
}
}
```



Product.cs

```
namespace AspNetCoreWebAPI.Models
```

```
{
```

```
    public class Product
```

```
    {
```

```
        public int Id { get; set; }
```

```
        public string Name { get; set; }
```

```
        public decimal Price { get; set; }
```

```
    }
```

```
}
```



Output :

Request URL
`http://localhost:5226/api/Products/1`

Server response

Code	Details
200	<p>Response body</p> <pre>{ "id": 1, "name": "Laptop", "price": 1000 }</pre> <p>Response headers</p> <pre>content-type: application/json; charset=utf-8 date: Sat, 16 Nov 2024 10:36:50 GMT server: Kestrel transfer-encoding: chunked</pre>

Request URL
`http://localhost:5226/api/Products`

Server response

Code	Details
200	<p>Response body</p> <pre>[{ "id": 1, "name": "Laptop", "price": 1000 }, { "id": 2, "name": "Smartphone", "price": 800 }]</pre> <p>Response headers</p> <pre>content-type: application/json; charset=utf-8 date: Sat, 16 Nov 2024 10:31:58 GMT server: Kestrel transfer-encoding: chunked</pre>