

```

using System;
using System.Collections.Generic;
using System.ComponentModel.DataAnnotations;
using System.ComponentModel.DataAnnotations.Schema;

namespace Medical
{
    [Table("CMS1500_Form")]
    public class CMS1500Form
    {
        [Key]
        public int FormId { get; set; }

        // Program Information (Item 1)
        [Required]
        public InsuranceProgram InsuranceProgram { get; set; }
        [MaxLength(20)]
        public string? InsuredIdNumber { get; set; }

        // Patient Information (Items 2-6)
        public required PatientInfo Patient { get; set; }

        // Insured Information (Items 4,7,14)
        public required InsuredInfo Insured { get; set; }

        // Other Insurance (Item 9)
        public OtherInsuranceInfo? OtherInsurance { get; set; }

        // Condition Related To (Item 10)
        public ConditionRelated ConditionRelated { get; set; } = new();

        // Service Details (Items 21,24)
        public List<DiagnosisCode> DiagnosisCodes { get; set; } = new();
        public List<ServiceLine> ServiceLines { get; set; } = new();

        // Provider Information (Items 25,32,33)
        public required ProviderInfo BillingProvider { get; set; }
        public required ProviderInfo ServiceFacility { get; set; }

        // Financials (Items 28-29)
        [Column(TypeName = "decimal(18,2)")]
        public decimal TotalCharge { get; set; }
        [Column(TypeName = "decimal(18,2)")]
        public decimal AmountPaid { get; set; }
    }
}

```

```

// Signatures (Items 12,31)
public DateTime PatientSignatureDate { get; set; }
public DateTime PhysicianSignatureDate { get; set; }

// Metadata
public DateTime CreatedDate { get; set; } = DateTime.UtcNow;
}

// ==== Supporting Classes ====

[Table("CMS1500_Address")]
public class Address
{
    [Key]
    public int AddressId { get; set; }
    [MaxLength(100)]
    public string? Street { get; set; }
    [MaxLength(50)]
    public string? City { get; set; }
    [MaxLength(2)]
    public string? State { get; set; }
    [MaxLength(10)]
    public string? ZipCode { get; set; }
    [MaxLength(20)]
    public string? Phone { get; set; }
}

[ComplexType]
public class PatientInfo
{
    [MaxLength(50)]
    public required string LastName { get; set; }
    [MaxLength(50)]
    public required string FirstName { get; set; }
    public DateTime BirthDate { get; set; }
    public Sex Sex { get; set; }
    public required Address Address { get; set; }
    public Relationship RelationshipToInsured { get; set; }
}

[ComplexType]
public class InsuredInfo
{

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[MaxLength(50)]
public required string LastName { get; set; }
[MaxLength(50)]
public required string FirstName { get; set; }
public required Address Address { get; set; }
[MaxLength(20)]
public string? GroupNumber { get; set; }
}

```

```

[ComplexType]
public class OtherInsuranceInfo
{
    [MaxLength(50)]
    public string? PolicyHolderName { get; set; }
    [MaxLength(20)]
    public string? PolicyNumber { get; set; }
    [MaxLength(50)]
    public string? PlanName { get; set; }
}

```

```

[ComplexType]
public class ConditionRelated
{
    public bool Employment { get; set; }
    public bool AutoAccident { get; set; }
    public bool OtherAccident { get; set; }
    [MaxLength(2)]
    public string? AccidentState { get; set; }
}

```

```

[Table("CMS1500_Diagnosis")]
public class DiagnosisCode
{
    [Key]
    public int DiagnosisId { get; set; }
    [MaxLength(10)]
    public required string Code { get; set; } // ICD-10 code
    public int Priority { get; set; } // A-L indicators (1-12)
}

```

```

[Table("CMS1500_ServiceLine")]
public class ServiceLine
{
    [Key]

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public int ServiceLineId { get; set; }
public DateTime ServiceStartDate { get; set; }
public DateTime ServiceEndDate { get; set; }
[MaxLength(10)]
public required string ProcedureCode { get; set; } // CPT/HCPCS
[MaxLength(2)]
public string? Modifier { get; set; }
[MaxLength(10)]
public string? DiagnosisPointer { get; set; } // Links to DiagnosisCode.Priority
[Column(TypeName = "decimal(18,2)")]
public decimal Charge { get; set; }
[MaxLength(20)]
public required string RenderingProviderId { get; set; }
}

```

```

[ComplexType]
public class ProviderInfo
{
    [MaxLength(100)]
    public required string Name { get; set; }
    [MaxLength(20)]
    public required string FederalTaxId { get; set; }
    public required Address Address { get; set; }
    [MaxLength(20)]
    public string? NpiNumber { get; set; }
    [MaxLength(20)]
    public string? Phone { get; set; }
}

```

```

// ===== Enums =====
public enum Relationship
{
    Self,
    Spouse,
    Child,
    Other
}

```

```

public enum Sex
{
    Male,
    Female,
    Other
}

```

```
public enum InsuranceProgram
{
    Medicare,
    Medicaid,
    TRICARE,
    CHAMPVA,
    Other
}
}
```