DAY 1:

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VIJAY M

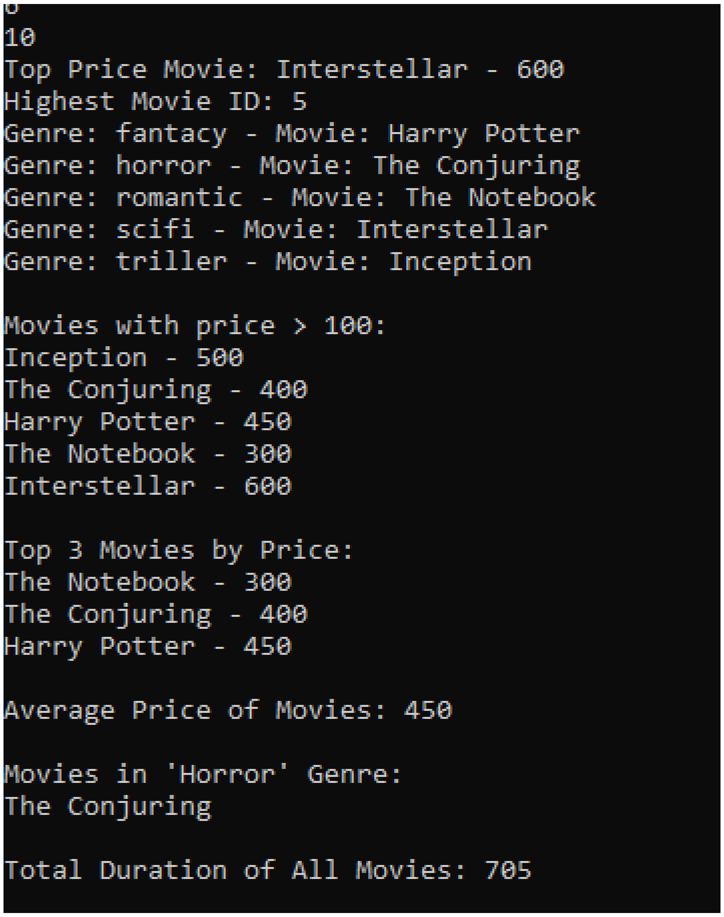
Movies List:

```
using System;
using System.Collections.Generic;
using System.Linq;
namespace Movies
{
    public enum genre
    {
        triller,
        horror,
        fantacy,
        romantic,
        scifi
    }
    public struct Movies
    {
        public int movieId;
        public string movieName;
        public string director;
        public string movieDescription;
        public string duration;
        public int price;
        public genre genre;
        public Movies(int movieId, string movieName, string director, string movieDescription, string duration,
            int price, genre genre)
        {
            this.movieId = movieId;
            this.movieName = movieName;
            this.director = director;
            this.movieDescription = movieDescription;
            this.duration = duration;
            this.price = price;
            this.genre = genre;
        }
    }
    public static class StringExtensions
    {
        public static string getLength(this string str)
        {
            return str.Length.ToString();
        }
    }
    class Program
    {
        public static void Main(string[] args)
        {
            Console.WriteLine("hello".getLength());
            Console.WriteLine(gettop3());
            var mytuple = (4, 5, five: 6);
            Console.WriteLine(mytuple.five);
            Console.WriteLine(getHighestValue(5, 10, (a, b) => a > b ? a : b));
            Movies movie1 = new Movies(1, "Inception", "Christopher Nolan", "A mind-bending thriller", "2h 28m", 500, genre.triller);
            Movies movie2 = new Movies(2, "The Conjuring", "James Wan", "Paranormal horror story", "1h 52m", 400, genre.horror);
            Movies movie3 = new Movies(3, "Harry Potter", "Chris Columbus", "Fantasy adventure in a magical school", "2h 32m", 450, genre.fantacy);
            Movies movie4 = new Movies(4, "The Notebook", "Nick Cassavetes", "Romantic drama", "2h 4m", 300, genre.romantic);
            Movies movie5 = new Movies(5, "Interstellar", "Christopher Nolan", "Sci-fi space exploration", "2h 49m", 600, genre.scifi);
            List<Movies> list = new List<Movies> { movie1, movie2, movie3, movie4, movie5 };
              var topprice = list.Aggregate((a, b) => a.price > b.price ? a : b);
            Console.WriteLine("Top Price Movie: " + topprice.movieName + " - " + topprice.price);
            var topMovieId = list.Max(a => a.movieId);
            Console.WriteLine("Highest Movie ID: " + topMovieId);
            var first = list.OrderBy(a => a.genre.ToString());
            foreach (var movie in first)
            {
                Console.WriteLine($"Genre: {movie.genre.ToString()} - Movie: {movie.movieName}");
            }
            var filter = list.Where(a => a.price > 100);
            Console.WriteLine("\nMovies with price > 100:");
            foreach (var movie in filter)
            {
                Console.WriteLine($"{movie.movieName} - {movie.price}");
            }
            var top3 = list.OrderBy(a => a.price).Take(3);
            Console.WriteLine("\nTop 3 Movies by Price:");
            foreach (var movie in top3)
            {
                Console.WriteLine($"{movie.movieName} - {movie.price}");
            }
            Console.WriteLine("\nAverage Price of Movies: " + GetAveragePrice(list));
            Console.WriteLine("\nMovies in 'Horror' Genre:");
            var horrorMovies = FilterByGenre(list, genre.horror);
            foreach (var movie in horrorMovies)
            {
                Console.WriteLine(movie.movieName);
            }
            Console.WriteLine("\nTotal Duration of All Movies: " + GetTotalDuration(list));
            Console.WriteLine("\nSorted Movies by Price (Descending):");
            var sortedByPriceDesc = SortMoviesByPriceDescending(list);
            foreach (var movie in sortedByPriceDesc)
            {
                Console.WriteLine(movie.movieName + " - " + movie.price);
            }
            Console.WriteLine("\nMovie Exists by Name ('Inception')?: " + MovieExistsByName(list, "Inception"));
        }
        static (int, float, string) gettop3()
```

```
{
    return (10, 90.0f, "5");
}
static int getHighestValue(int a, int b, Func<int, int, int> getHight)
{
    return getHight(a, b);
}
static double GetAveragePrice(List<Movies> list)
{
    return list.Average(movie => movie.price);
}
static List<Movies> FilterByGenre(List<Movies> list, genre selectedGenre)
{
    return list.Where(movie => movie.genre == selectedGenre).ToList();
}
static int GetTotalDuration(List<Movies> list)
{
    int totalDuration = 0;
    foreach (var movie in list)
    {
       string[] durationParts = movie.duration.Split(' ');
        int hours = int.Parse(durationParts[0].Replace("h", ""));
        int minutes = int.Parse(durationParts[1].Replace("m", ""));
        totalDuration += (hours * 60) + minutes;
    }
    return totalDuration;
```

```
        }

        static List<Movies> SortMoviesByPriceDescending(List<Movies> list)

        {

            return list.OrderByDescending(movie => movie.price).ToList();

        }

        static bool MovieExistsByName(List<Movies> list, string name)

        {

            return list.Any(movie => movie.movieName.Equals(name,
StringComparison.OrdinalIgnoreCase));

        }

    }

}
```

output



```
10
Top Price Movie: Interstellar - 600
Highest Movie ID: 5
Genre: fantacy - Movie: Harry Potter
Genre: horror - Movie: The Conjuring
Genre: romantic - Movie: The Notebook
Genre: scifi - Movie: Interstellar
Genre: triller - Movie: Inception

Movies with price > 100:
Inception - 500
The Conjuring - 400
Harry Potter - 450
The Notebook - 300
Interstellar - 600

Top 3 Movies by Price:
The Notebook - 300
The Conjuring - 400
Harry Potter - 450

Average Price of Movies: 450

Movies in 'Horror' Genre:
The Conjuring

Total Duration of All Movies: 705
```