***University of Barishal***

*Assignment On*

Newton’s forward interpolation: representation of

numerical data by a polynomial curve

Course Title: Numerical Methods

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***Newton’s Forward Interpolation: Representation of Numerical Data by a Polynomial Curve***

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**What:**

Interpolation is the process of computing intermediate values of a function form the set of given values of the function.

Newtons forward difference formula is a finite difference identity giving an interpolated value between tabulated points in terms of the first value and the powers of the forward difference.

It’s a formula which has been derived from newton’s forward interpolation. It’s representation of the numerical data on a pair of variables by a polynomial curve. This is a repeated application for counting interpolated values.

**Why:**

With the derived formula from Newton’s forward interpolation or New, we can reduce the numerical computation, Compute large number of interpolated values, represent the numerical data by a polynomial curve and also familiar with real life problems (Ex. Large number of population) and application of the formula

**How:**

By applying values of x and y is applied to the formula where x is equal interval. By solving the equations and algebraic expansion, a polynomial curve for numerical data on a pair of variables is established. The required formula for representing a given set of numerical data on a pair of variables by a suitable polynomial we have aimed at.

**Limitation:**

If the data has large number of swings, then the relations take unnatural curve. If we calculate a missing value, it will not be accurate.

**Future Work:**

In future for the large number of data swings then missing value can be accurate.