Berejnec Adrian-Daniel 1.1

**Metoda Cordic**

Pentru implementarea algoritmului am ales limbajul de programare C.

Mediul de lucru este CLion.

**Implementare algoritm :**

Prima parte :

* Functie pentru a calcula K
* Initializarea variabilelor cu valorile initiale respective

Text

Description automatically generated

A doua parte :

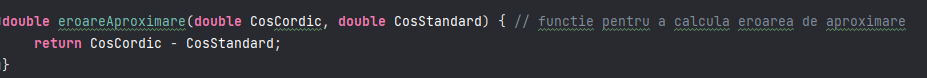
* Calculul valorilor cerute cu ajutorul unui “for”
* Afisarea corespunzatoare pentru fiecare iteratie

Text

Description automatically generated with medium confidence

A treia parte:

* Crearea unei functii de calcul pentru eroarea de aproximare



Ultima parte:

* Crearea unui “main” corespunzator
* Apelarea functiilor create: CordicCos() si eroareAproximare()

A screenshot of a computer

Description automatically generated with medium confidence

**Tabel valori:**

K = 1.64674351

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Iteratie (i) | z(i) | y(i) | x(i) | alfa(i) |
| 0 | 0.52359878 | 0.00000000 | 0.60725448 | 0.78539816 |
| 1 | -0.26179939 | 0.60725448 | 0.60725448 | 0.46364761 |
| 2 | 0.20184822 | 0.30362724 | 0.91088172 | 0.24497866 |
| 3 | -0.04313044 | 0.53134767 | 0.83497491 | 0.12435499 |
| 4 | 0.08122455 | 0.42697581 | 0.90139337 | 0.06241881 |
| 5 | 0.01880574 | 0.48331289 | 0.87470738 | 0.03123983 |
| 6 | -0.01243409 | 0.51064750 | 0.85960385 | 0.01562373 |
| 7 | 0.00318964 | 0.49721619 | 0.86758272 | 0.00781234 |
| 8 | -0.00462270 | 0.50399418 | 0.86369822 | 0.00390623 |

b) **Eroarea de aproximare:**

ε = cosCORDIC – cosSTANDARD = -0.00035846

Text

Description automatically generated