

```

/*
 * main.cpp
 *
 * Created on: Dec 29, 2009
 * Author: koscum
 */

#include "GF.h"

int main(int argc, char* argv[])
{
    try
    {
        int rijndaelCoefficients[] = {1, 1, 0, 1, 1, 0, 0, 0, 1};
        GF::Polynomial rijndaelIrreducible(rijndaelCoefficients, 8);
        GF::GF rijndaelField(2, 8, rijndaelIrreducible);

        int polynomialCoefficientsA[] = {1, 1, 0, 0, 1, 0, 1, 0, 0};
        GF::Polynomial polynomialA(polynomialCoefficientsA, 8);

        int polynomialCoefficientsB[] = {0, 1, 0, 1, 0, 0, 1, 1, 0};
        GF::Polynomial polynomialB(polynomialCoefficientsB, 8);

        GF::Polynomial polynomialC(3);

        std::cout << rijndaelField << std::endl;

        std::cout << std::endl << polynomialA <<
            " + " << polynomialB <<
            " = " << rijndaelField.Add(polynomialA, polynomialB) << std::endl;

        std::cout << std::endl << polynomialA <<
            " - " << polynomialB <<
            " = " << rijndaelField.Sub(polynomialA, polynomialB) << std::endl;

        std::cout << std::endl << polynomialA <<
            " * " << polynomialB <<
            " = " << rijndaelField.Mul(polynomialA, polynomialB) << std::endl;

        std::cout << std::endl << polynomialA <<
            " / " << polynomialB <<
            " = " << rijndaelField.Div(polynomialA, polynomialB) << std::endl;

        std::cout << std::endl << polynomialA <<
            " % " << polynomialB <<
            " = " << rijndaelField.Mod(polynomialA, polynomialB) << std::endl;

        std::cout << std::endl << polynomialA <<
            " ^ " << polynomialC <<
            " = " << rijndaelField.Pow(polynomialA, polynomialC) << std::endl;

        std::cout << std::endl << std::endl << "-----" << std::endl << std::endl;

        GF::GF GF7(7);
        std::cout << GF7 << std::endl;
    }
}

```

```
std::cout << std::endl << std::endl << "-----" << std:::  
endl << std::endl;
```

```
GF::GF GF27(27);
```

```
std::cout << GF27 << std::endl;
```

```
}
```

```
catch (GF::Error e)
```

```
{
```

```
std::cout << e;
```

```
}
```

```
}
```