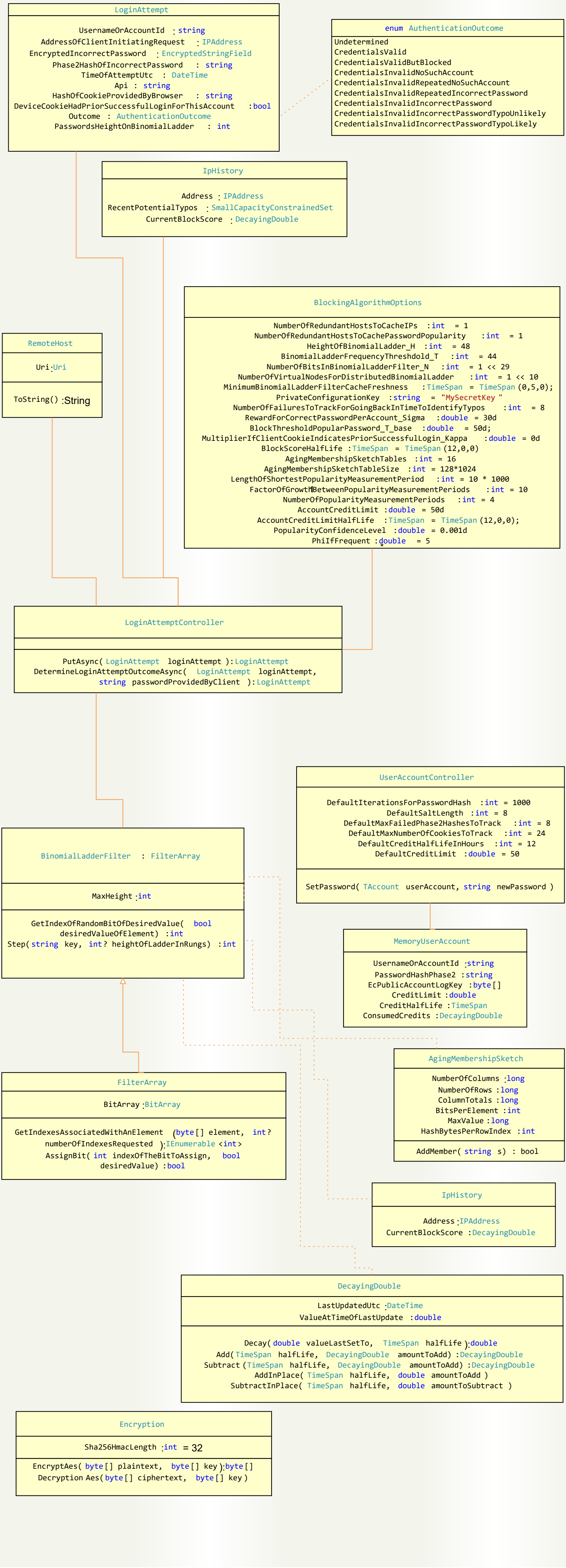
LoginAttempt
UsernameOrAccountId : string
AddressOfClientInitiatingRequest : IPAddress
EncryptedIncorrectPassword : EncryptedStringField
Phase2HashOfIncorrectPassword : string
TimeOfAttemptUtc : DateTime
Api : string
HashOfCookieProvidedByBrowser : string
DeviceCookieHadPriorSuccessfulLoginForThisAccount : bool
Outcome : AuthenticationOutcome
PasswordsHeightOnBinomialLadder : int
enum AuthenticationOutcome
Undetermined
CredentialsValid
CredentialsValidButBlocked
CredentialsInvalidNoSuchAccount
CredentialsInvalidRepeatedNoSuchAccount
CredentialsInvalidRepeatedIncorrectPassword
CredentialsInvalidIncorrectPassword
CredentialsInvalidIncorrectPasswordTypoUnlikely
CredentialsInvalidIncorrectPasswordTypoLikely
IpHistory
Address : IPAddress
RecentPotentialTypos : SmallCapacityConstrainedSet
CurrentBlockScore : DecayingDouble
BlockingAlgorithmOptions
NumberOfRedundantHostsToCacheIPs :int = 1
NumberOfRedundantHostsToCachePasswordPopularity :int = 1
HeightOfBinomialLadder_H :int = 48
BinomialLadderFrequencyThreshdold_T :int = 44
NumberOfBitsInBinomialLadderFilter_N :int = 1 << 29
NumberOfVirtualNodesForDistributedBinomialLadder :int = 1 << 10
MinimumBinomialLadderFilterCacheFreshness :TimeSpan = TimeSpan(0,5,0);
PrivateConfigurationKey :string = "MySecretKey "
NumberOfFailuresToTrackForGoingBackInTimeToIdentifyTypos :int = 8
RewardForCorrectPasswordPerAccount_Sigma :double = 30d
BlockThresholdPopularPassword_T_base :double = 50d;
MultiplierIfClientCookieIndicatesPriorSuccessfulLogin_Kappa :double = 0d
BlockScoreHalfLife :TimeSpan = TimeSpan(12,0,0)
AgingMembershipSketchTables :int = 16
AgingMembershipSketchTableSize :int = 128*1024
LengthOfShortestPopularityMeasurementPeriod :int = 10 * 1000
FactorOfGrowthBetweenPopularityMeasurementPeriods :int = 10
NumberOfPopularityMeasurementPeriods :int = 4
AccountCreditLimit :double = 50d
AccountCreditLimitHalfLife :TimeSpan = TimeSpan(12,0,0);
PopularityConfidenceLevel :double = 0.001d
PhiIfFrequent :double = 5
RemoteHost
Uri:Uri
ToString() :String
LoginAttemptController
PutAsync(LoginAttempt loginAttempt):LoginAttempt
DetermineLoginAttemptOutcomeAsync(LoginAttempt loginAttempt, string passwordProvidedByClient):LoginAttempt
UserAccountController
DefaultIterationsForPasswordHash :int = 1000
DefaultSaltLength :int = 8
DefaultMaxFailedPhase2HashesToTrack :int = 8
DefaultMaxNumberOfCookiesToTrack :int = 24
DefaultCreditHalfLifeInHours :int = 12
DefaultCreditLimit :double = 50
SetPassword(TAccount userAccount, string newPassword)
BinomialLadderFilter : FilterArray
MaxHeight :int
GetIndexOfRandomBitOfDesiredValue(bool desiredValueOfElement) :int
Step(string key, int? heightOfLadderInRungs) :int
MemoryUserAccount
UsernameOrAccountId :string
PasswordHashPhase2 :string
EcPublicAccountLogKey :byte[]
CreditLimit :double
CreditHalfLife :TimeSpan
ConsumedCredits :DecayingDouble
FilterArray
BitArray :BitArray
GetIndexesAssociatedWithAnElement (byte[] element, int? numberOfIndexesRequested):IEnumerable<int>
AssignBit(int indexOfTheBitToAssign, bool desiredValue) :bool
AgingMembershipSketch
NumberOfColumns :long
NumberOfRows :long
ColumnTotals :long
BitsPerElement :int
MaxValue :long
HashBytesPerRowIndex :int
AddMember(string s) : bool
IpHistory
Address :IPAddress
CurrentBlockScore :DecayingDouble
DecayingDouble
LastUpdatedUtc :DateTime
ValueAtTimeOfLastUpdate :double
Decay(double valueLastSetTo, TimeSpan halfLife):double
Add(TimeSpan halfLife, DecayingDouble amountToAdd) :DecayingDouble
Subtract (TimeSpan halfLife, DecayingDouble amountToAdd) :DecayingDouble
AddInPlace(TimeSpan halfLife, double amountToAdd)
SubtractInPlace(TimeSpan halfLife, double amountToSubtract)
Encryption
Sha256HmacLength :int = 32
EncryptAes(byte[] plaintext, byte[] key):byte[]
Decryption Aes(byte[] ciphertext, byte[] key)