

Fraction
<ul style="list-style-type: none"> - numerator: int - denominator: int + Fraction(int) + Fraction(int, int) + Fraction(int, int, int)
<ul style="list-style-type: none"> - <u>toImproperNumerator(int, int, int): int</u> - <u>reducedDivider(int, int): int</u> - <u>gcd(int, int): int</u> + getNumerator(): int + getDenominator(): int + getWhole(): int + setNumerator(int): void + setDenominator(int): void + equals(Fraction): Fraction + clone(Fraction): Fraction + toString(): String + toDouble(): double + add(Fraction): Fraction + subtract(Fraction): Fraction + multiply(Fraction): Fraction + divide(Fraction): Fraction + pow(int): Fraction + <u>fractionForm(): String</u> - <u>space(): String</u> - <u>wholeFractionForm(): String</u> - <u>impropFractionForm(): String</u> - <u>mixedFractionForm(): String</u> - <u>generateNum(int): int</u> + <u>random(): Fraction</u> + <u>valueOf(String): Fraction</u>

vector
<ul style="list-style-type: none"> - x: Fraction - y: Fraction - z: Fraction - dimension: int + vector(Fraction) + vector(Fraction, Fraction) + vector(Fraction, Fraction, Fraction)
<ul style="list-style-type: none"> + add(vector): vector + subtract(vector): vector + scalarMultiply(Fraction): vector + dotProduct(vector): vector + crossProduct(vector): vector + equals(vector): boolean + toString(): String + getX(): Fraction + getY(): Fraction + getZ(): Fraction + getUnitX(): double + getUnitY(): double + getUnitZ(): double + getDimension(): int + isDimensionSame(vector): boolean + <u>abs(vector): double</u> + <u>VectorFormat(): String</u> - <u>isVector3DFormat(String): boolean</u> - <u>isVector2DFormat(String): boolean</u> - <u>isVector1DFormat(String): boolean</u> + <u>angle(vector, vector): int</u> - <u>checkStringDimension(String): int</u> + <u>random2D(): vector</u> + <u>random3D(): vector</u> + <u>valueOf(String): vector</u>

VectorCalculator
<ul style="list-style-type: none"> - <u>calculateScalar(String): vector</u> - <u>calculateVector(String): String, String): String</u> - <u>removeVector(vector): String</u> - <u>removeScalar(String): String</u> - <u>sperateImportantBrackets(String): String[]</u> - <u>spiltPair(String): String[]</u> - <u>VectorScalarFormat(): String</u> - <u>space(): String</u> - <u>VectorEquFormat(): String</u> - <u>extractPair(String, String): String[]</u> - <u>findNextPair(String): String[]</u> - <u>isCalculate(String): boolean</u> - <u>runCalculations(String): String</u> - <u>handleScalar(String): String</u> + <u>calculate(String): String</u>

UserInput
<ul style="list-style-type: none"> - scan: Scanner
<ul style="list-style-type: none"> + <u>getValue(): String</u> + <u>pressEnter(): void</u> + <u>close(): void</u>

Main
<ul style="list-style-type: none"> - <u>printIntro(): void</u> - <u>run(): void</u>

Quiz
<ul style="list-style-type: none"> - <u>printInstructions(): void</u> - <u>printIntro(): void</u> - <u>randomVecScalar3D(): String</u> - <u>randomVecScalar2D(): String</u> - <u>selectQuestion(questionType): String</u> - <u>generateAngleQuestion(): String</u> - <u>generateOperationQuestion(questionType type): String</u> - <u>generateComplexQuestion(): String</u> - <u>getCorrectAnswer(String, questionType): String</u> - <u>isAnswerCorrect(String, String, questionType): boolean</u> - <u>runQuestion(questionType): void</u> + <u>runQuiz(): void</u>

VecCalclaterInterface
<ul style="list-style-type: none"> - <u>VectorCalcuInstruction(): void</u> + <u>runVecCalcu(): void</u>