```
Renderer
# static constexpr int
CELL SIZE
+ virtual ~Renderer()
+ GamePixmapItem * renderGame
Objects(QList < QMap < DataRole,
QVariant >> objectData)
+ virtual GamePixmapItem
* renderGameObject(QMap
< DataRole, QVariant > objectData)
+ virtual void renderGameObject
(QMap < DataRole, QVariant
 objectData, GamePixmapItem *item)
+ QPixmap rotatePixmap
(const QPixmap &originalPixmap,
int direction)
+ Qlmage rotatelmage
(const Qlmage &image,
int direction)
# QImage animateHealthPack
(int health, GamePixmapItem *item)
# QPropertyAnimation
* animateTint(QColor
final, QColor initial
={0, 0, 0, 0})
# QPropertyAnimation
* animateAttack(int
dir, bool attacking)
# QPropertyAnimation
* animateBounce()
# QPropertyAnimation
* animateHealth(Direction dir)
# QPropertyAnimation
* animateHide()
            SpriteRenderer
  + static const QMap<
   ObjectType, CharacterData
   > m_charMap
  QImage m_tilesQImage m_characters
  - QSize m_charSize

    QSize m_tileSize

  + SpriteRenderer()
  + void renderGameObject
  (QMap < DataRole, QVariant
     data, GamePixmapItem
   *item) override
  + GamePixmapItem * renderGame
  Object(QMap < DataRole, QVariant
   > data) override
   QImage sliceFrames
  (QImage image, QLine
   diagonal, QPoint frameSize)

    QRect getTileRect(QMap

  < DataRole, QVariant >
   data)
    QRect getCharacterRect
  (ObjectType type)
   int calculateFrame
  (QVariant direction,
   int POVnum)
   QPropertyAnimation
   * animateDeath(QPoint
   frame)
   Qlmage m_tiles
  * QImage m_charac
* QSize m_charSize
               characters
    QSize m_tileSize
```