

CASTLEAR BUILDER



MANUAL

VERSION ALPHA 0.2

Idea:

Initially, I planned to do a lot of asses, perhaps even a whole system of medieval, fantasy structures. However, ready objects greatly reduced the variety and design possibilities. In this regard, I decided to create a kind of designer, fast and easy, in which you can create buildings for scenes in virtually any type of game. About a thousand objects were created, but placing them and creating quality structures out of them was not very convenient. Especially for convenience, the "Castle Builder" window was designed, which makes the design of the structures in the scenes quick and pleasant. I hope you will enjoy. And do not forget that only your comments make my project better. Offer your ideas and suggestions on the forum and by e-mail (data at the end of the document).



PAGES LIST

MAIN LOGIC

BUILDER WINDOW

INITIALISE PANEL

BOX

TOWERS

MODIFICATE PANEL

OPTIONS

HISTORY

CONSTRUCTOR PANEL

STANDARD MODULES INCLUDED IN THE ASSET

AFTERWORD

MainLogic.

THE LOGIC OF THE CONSTRUCTOR IS QUITE SIMPLE. AS FOR THE "BUILDINGS" MODULE, EACH STRUCTURE CONSISTS OF EQUAL PARTS OF WALLS, SIDE COLUMNS, HORIZONTAL BEAMS AND PINS LOCATED BETWEEN THE BEAMS AND BETWEEN THE COLUMNS. THUS, A BUILDING WITHOUT A ROOF OF 1x1x1 SIZE CONTAINS 4 WALLS, 4 COLUMNS, 8 BEAMS, 8 PINS AND TWO PLATFORMS ON THE FLOOR AND CEILING.

I WAS STRIVING TO ACHIEVE SOME LEVEL ALIGNMENT OF COMPONENTS. SO THAT THEY DO NOT ENTER THE VOLUME INTO ANOTHER. I THINK THIS WILL BE A NICE ADDITION IN THOSE GAMES WHERE THE COMPONENTS OF THE BUILDING USE "RIGIDBODY", THE DESTRUCTION OF BUILDINGS OR CONSTRUCTION ITSELF. IN THOSE CASES, WHERE THE INTERNAL CONTENT OF THE BUILDING DOES NOT MATTER, IT IS ENOUGH TO SIMPLY DESIGN THE OUTER PART OR EVEN ONLY THE PART TURNED TO THE CAMERA. COMPONENTS DO NOT HAVE TO BE EXACTLY LOCATED, YOU LEFT THE DESIGNER AND DO WITH THEM WHATEVER YOU WANT.

HOWEVER, I DO NOT RECOMMEND CHANGING THE SIZE OF

THE COMPONENTS, SINCE THERE ARE QUITE A FEW OF THEM AND IT WILL BE PROBLEMATIC TO EDIT (ADD NEW ONES). IF STILL THERE IS SUCH A NEED, THEN I RECOMMEND RESIZING ONLY THE UPPER PARENT IN THE TRANSFORM HIERARCHY.

THE HIERARCHY HAS A VERY LARGE ROLE FOR THE CONVENIENT ORGANIZATION OF OBJECTS ON THE STAGE. I ADVISE YOU NOT TO IGNORE IT. WHEN I AM DESIGNING LEVELS, I DEFINE ALL OBJECTS OF THE BUILDING TYPE IN THE CHILD OBJECTS OF ONE EMPTY OBJECT. THIS HELPS TO NOT GET LOST IN THE INSPECTOR.

EACH COMPONENT CAN BE REPLACED WITH A SIMILAR ONE TO GIVE A UNIQUE STYLE OF BUILDING. FOR ALL MAJOR TYPES THERE ARE MANY ANALOGS, STUDY THE AVAILABLE COMPONENTS IN THE DESIGNER, AND YOU WILL NOT BE DISAPPOINTED.

INITIALISE PANEL



IP GIVES ACCESS TO TEST FUNCTIONS FOR CREATING SOME STRUCTURES. FROM THE POINT OF VIEW OF TIME AND CONVENIENCE, IN MY OPINION, THIS IS THE CREATION OF A FINISHED FORM AND ITS SUBSEQUENT MODIFICATION, RATHER THAN CREATING OBJECTS WITH ONLY THE NECESSARY ELEMENTS. AT THE MOMENT, IT IS POSSIBLE TO CREATE A BUILDING BOX AND THREE TYPES OF TOWERS.

DESCRIPTION OF FUNCTIONS

1. SLIDER "HEIGHT" DETERMINES THE HEIGHT OF THE BOX AND TOWERS

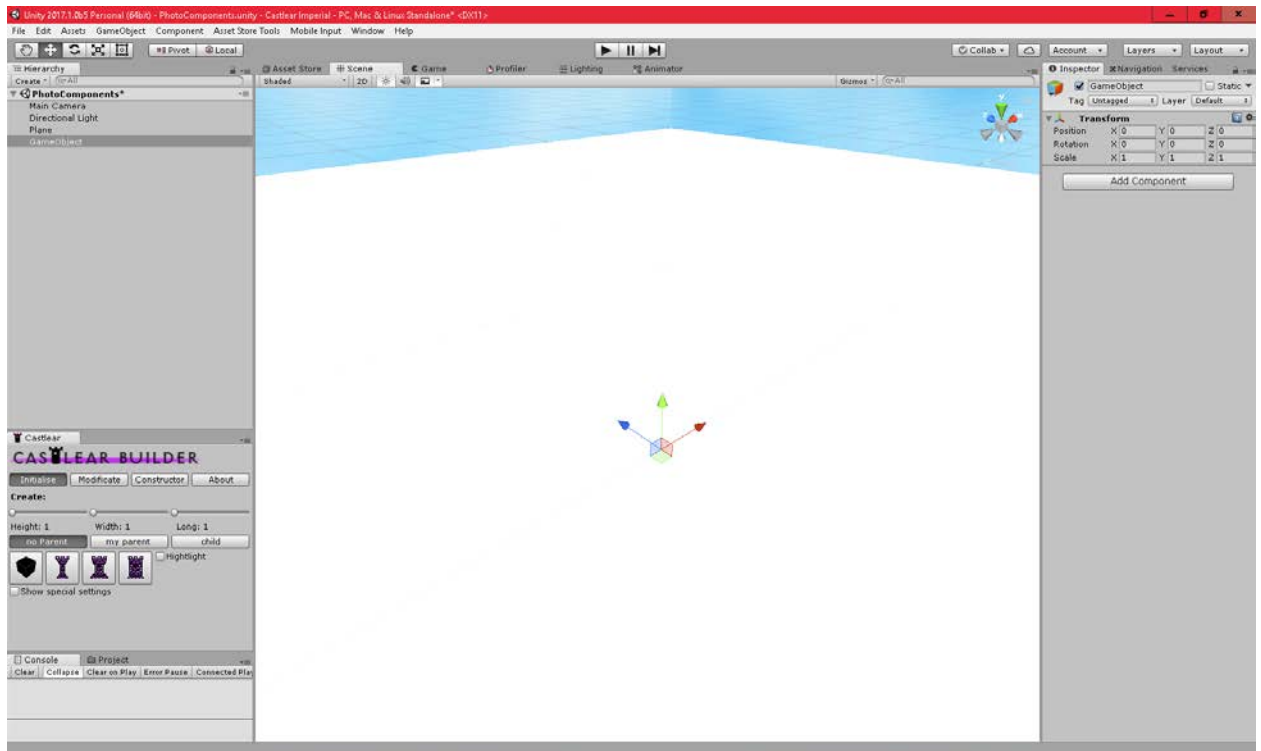
2. THE "WIDTH" AND "LENGTH" SLIDERS DEFINE THE APPROPRIATE BOX DIMENSIONS.

3. THE PARENT SELECTION GRID DETERMINES WHERE THE RESULTING OBJECT WILL BE IN THE TRANSFORMATION HIERARCHY RELATIVE TO THE SELECTED OBJECT.

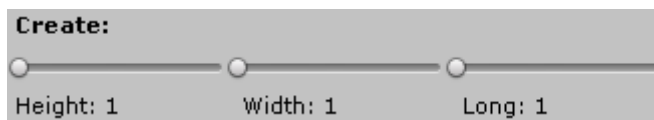
4. BUTTONS WITH ICONS ARE RESPONSIBLE FOR CREATING THE APPROPRIATE STRUCTURES.

5. TOGGLE BACKLIGHT INCLUDES A TEST BACKLIGHT WITH THE HELP OF THE DEBUG.DRAWLINE.

HOW TO CREATE BUILDINGS



1. CREATE AN EMPTY OBJECT.



2. CHANGE THE SIZE OF THE EXPECTED RESULT. ATTENTION! DO NOT STAND TOO LARGE OBJECTS, THIS CAN DAMAGE OPTIMIZATION. THE MAXIMUM VALUES OF THE SLIDERS ARE NOT TOO LIMITED.

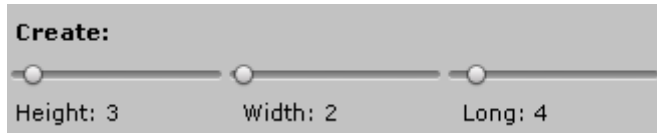
REMEMBER IN THE MIDDLE AGES THERE WERE NO SKYSCRAPERS!

3. PRESS ONE OF THE AVAILABLE BUTTONS FOR CREATING THE STRUCTURE. FOR THE LENGTH IS CONSIDERED THE X-VALUE IN THE CARTESIAN COORDINATE SYSTEM (BLUE ARROW). FOR THE WIDTH OF THE Z-VALUE (RED ARROW). FOR HEIGHT Y (GREEN ARROW).

ATTENTION! THE SELECTED OBJECT MUST HAVE A ROTATION ON

THE X AND Z AXES EQUAL TO ZERO, OTHERWISE THE RESULT WILL SHOCK you.

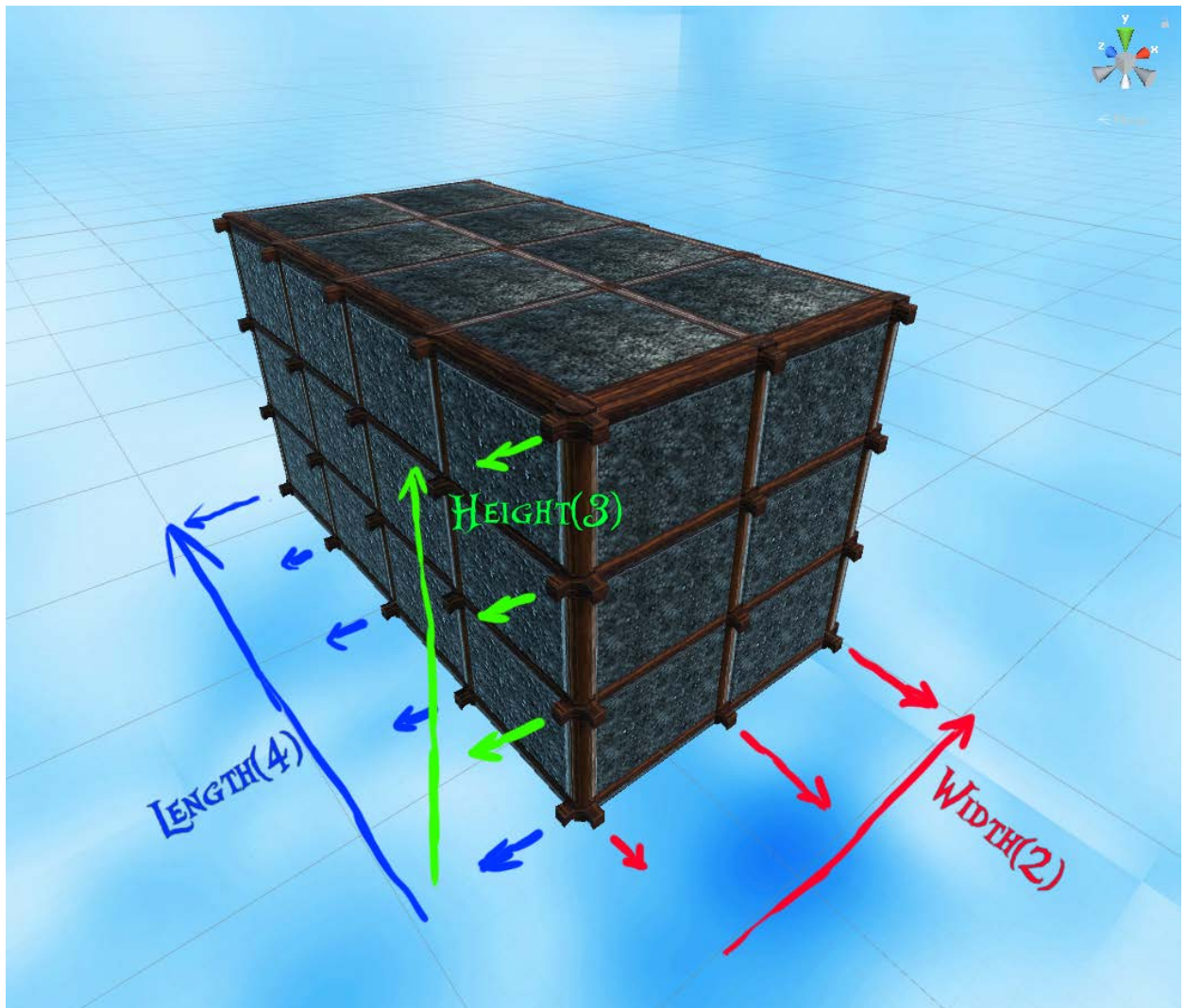
EXAMPLE: SELECT AN EMPTY OBJECT AND SUCH PARAMETERS:



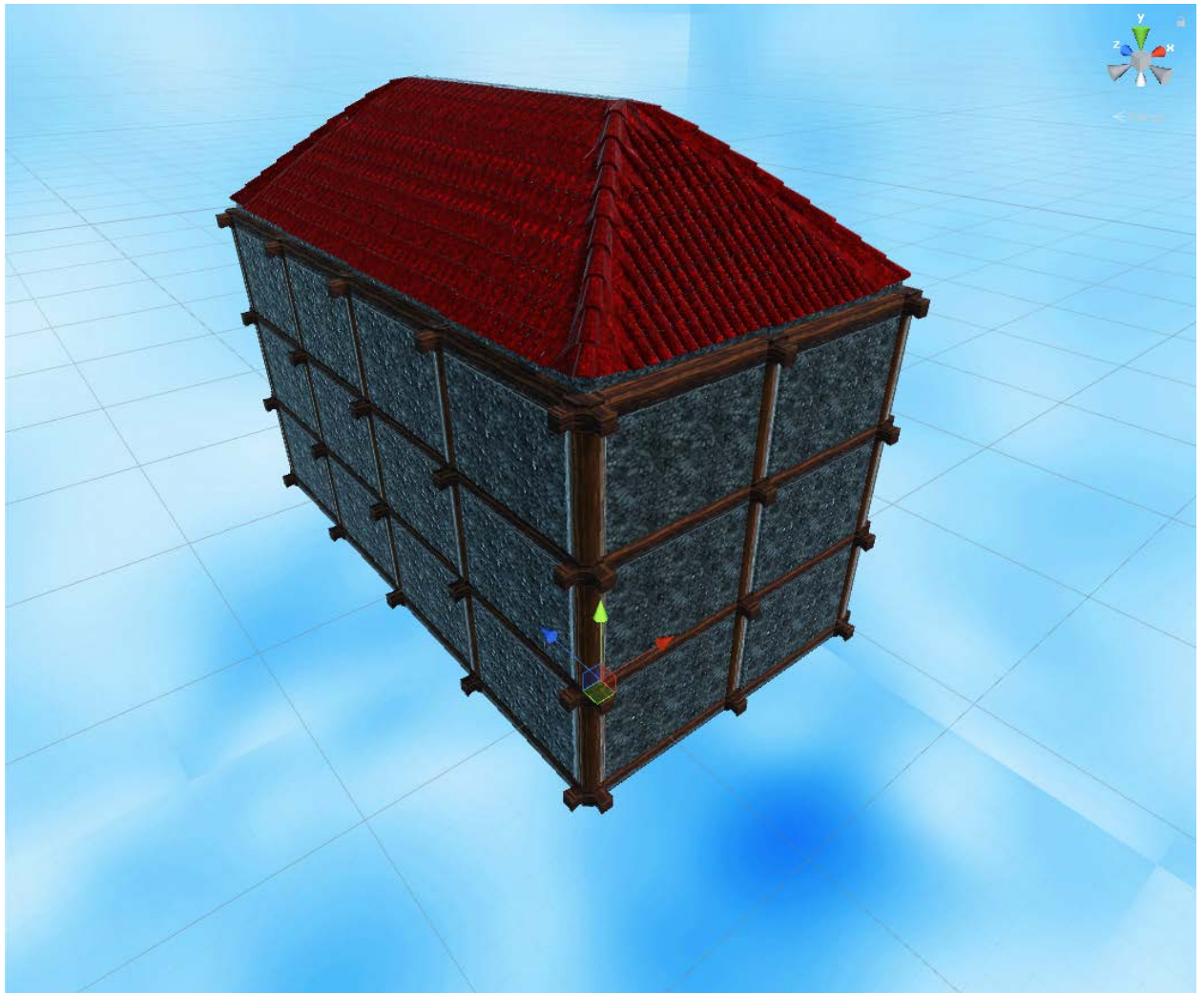
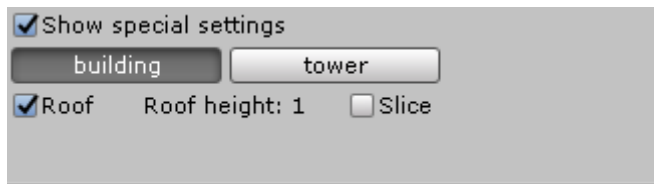
AND CLICK THE BUTTON TO CREATE A BOX



RESULT:



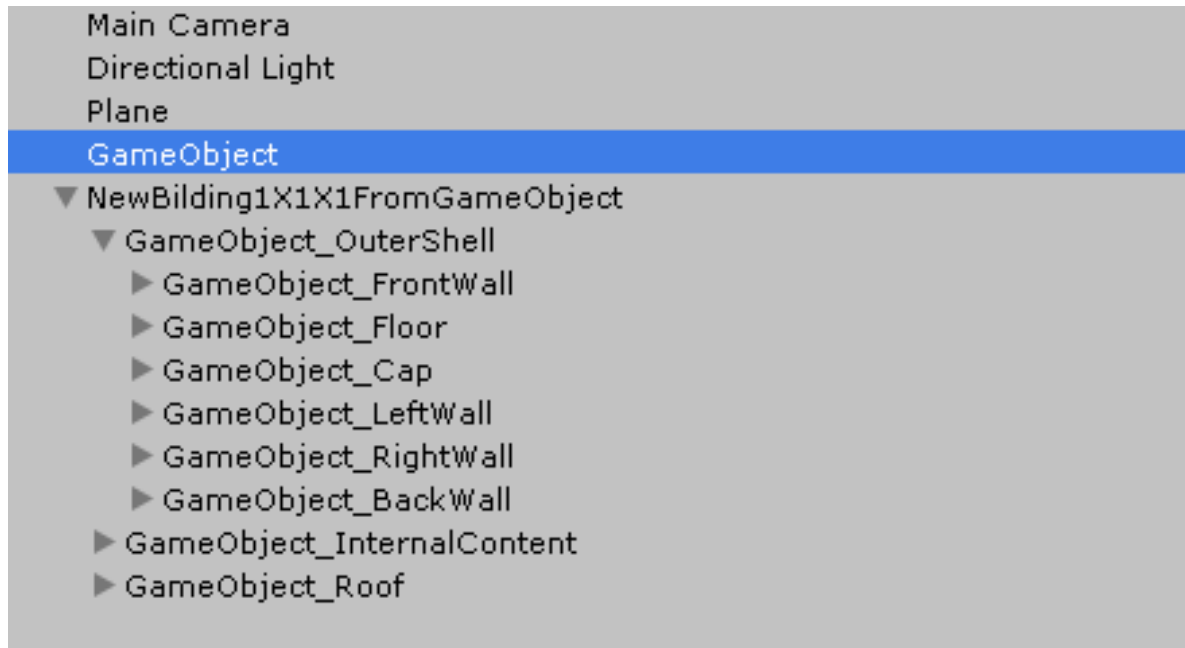
ALSO IN THE SPECIAL SETTINGS YOU CAN SPECIFY THE CREATION OF THE ROOF.



THE HEIGHT OF THE ROOF WILL BE HALF THE MINIMUM BETWEEN HEIGHT AND WIDTH.

THE SLICE OPTION LIMITS THE MAXIMUM HEIGHT OF THE ROOF TO FLAT PLATFORMS.

THE NEW GAME OBJECT HAS A RIGID TRANSFORM-HIERARCHY:



IN SOME CASES, IT IS NECESSARY TO DELETE AN UNNECESSARY PART OR EDIT SEPARATELY FROM THE ENTIRE DESIGN. WE CAN DELETE THE REQUIRED PART BY DELETING THE CORRESPONDING EMPTY PARENT OBJECT. OR IF YOU NEED TO EDIT A PART SEPARATELY FROM THE WHOLE STRUCTURE, YOU CAN TAKE THE PARENT OUT OF THE STRUCTURE, CHANGE HIS CHILDREN, AND THEN RESET HIS POSITION, AND HE WILL RETURN TO HIS PLACE.

CREATION OF TOWERS

SELECT ONLY THE HEIGHT:

Create:

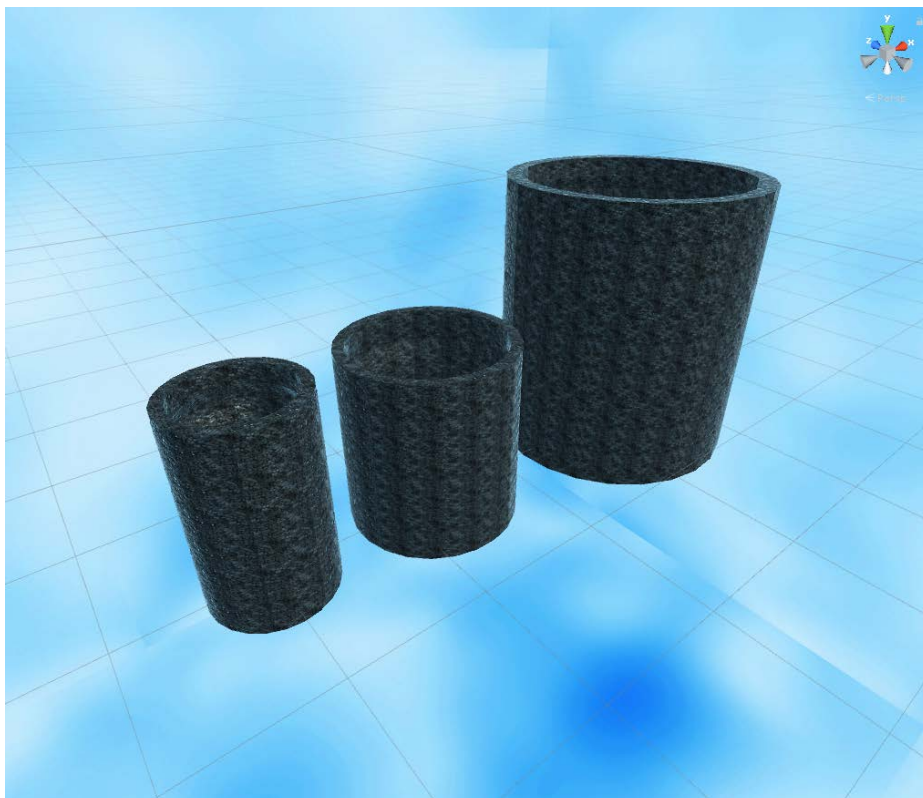
Height: 3 Width: 1 Long: 1

CHOOSE WHERE THE RESULT WILL BE IN THE TRANSFORMATION HIERARCHY WITH RESPECT TO THE SELECTED OBJECT, THE SAME CAN BE DONE WITH BOX. By default, the result does not have a parent.

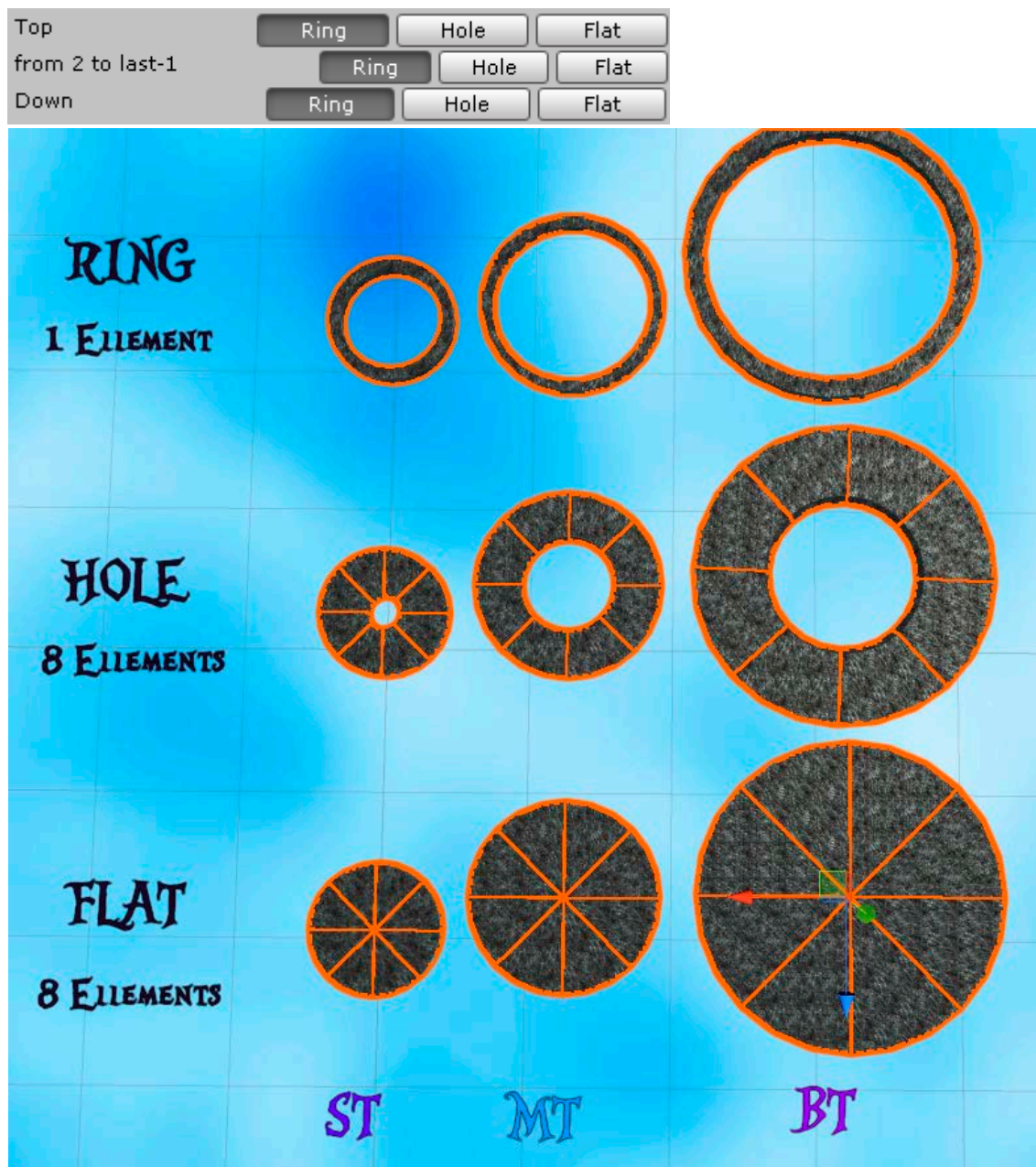
AND CLICK THE BUTTON CORRESPONDING TO ONE OF THE THREE TYPES OF TOWERS (SMALL, MEDIUM AND BIG)



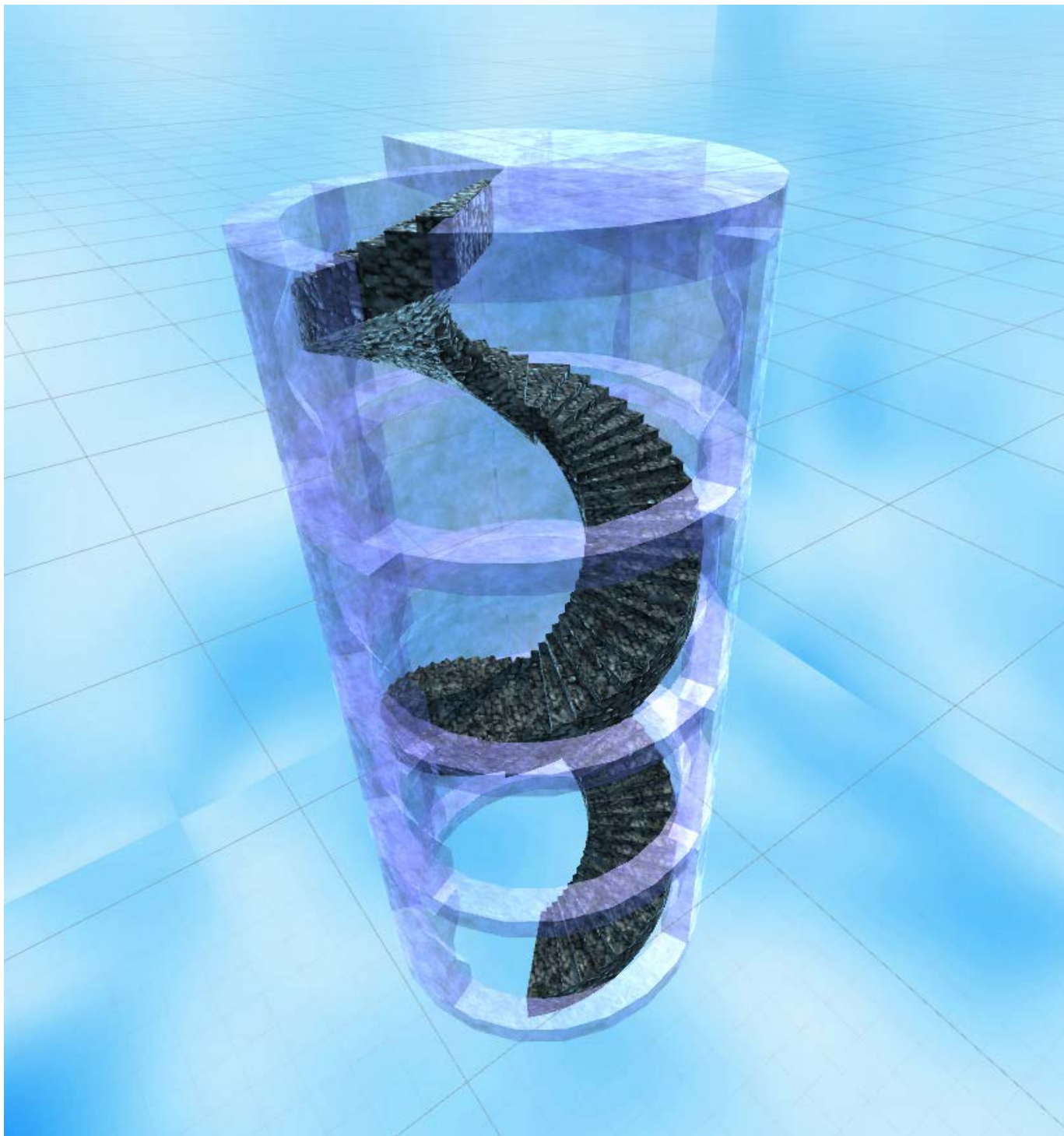
AS A RESULT, YOU WILL GET SUCH CYLINDERS



IN SPECIAL SETTINGS YOU CAN SPECIFY THE TYPE OF FLOOR FOR THE FIRST, LAST AND OTHER FLOORS.



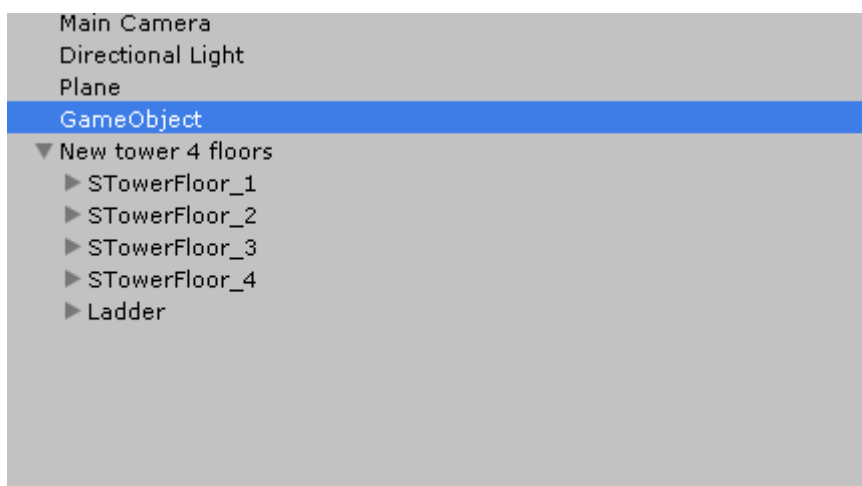
THE “LADDER” PARAMETER ADDS A ROUND LADDER TO THE ENTIRE
HEIGHT OF THE TOWER



THE CREATE TOP OPTION ALLOWS YOU TO CREATE A TOP OF THREE TYPES



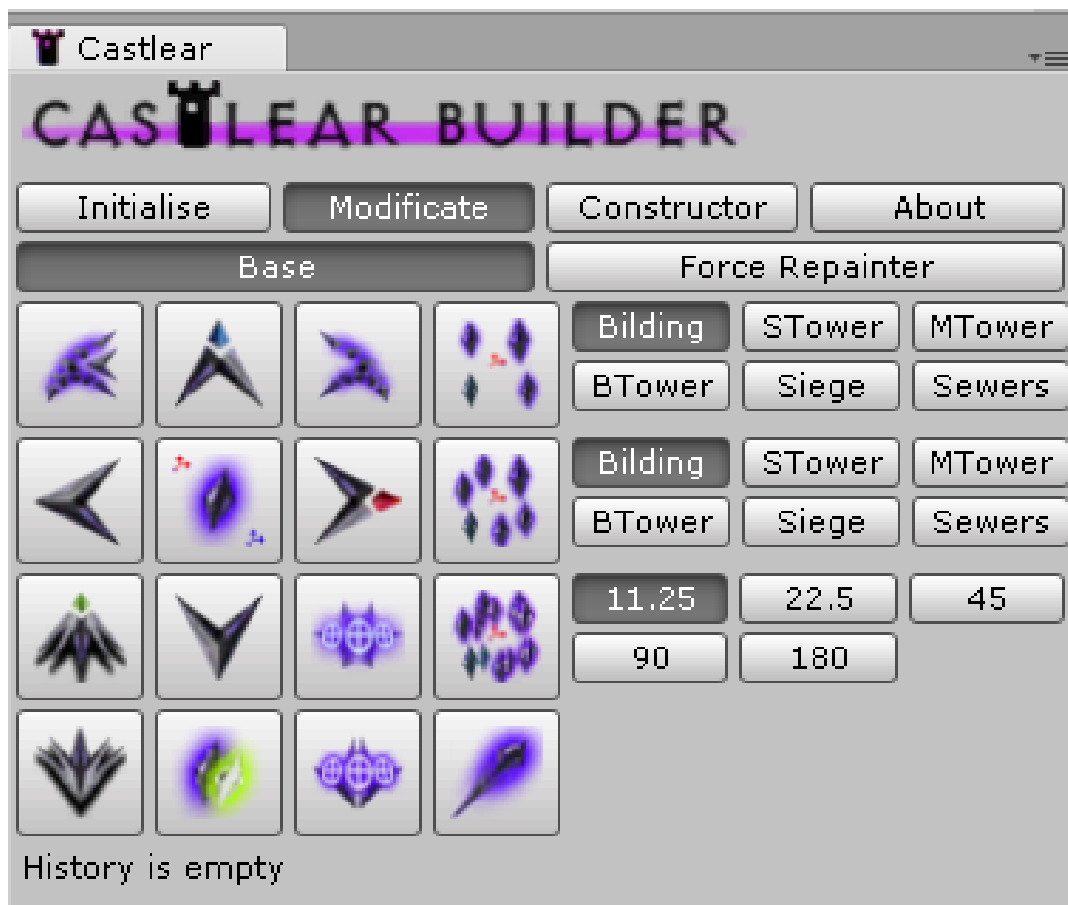
STRUCTURE OF THE TOWER. IN TOWERS, THE STRUCTURE OF THE HIERARCHY IS DIVIDED BY FLOORS.



MODIFICATE PANEL

THE MODIFICATION PANEL ALLOWS YOU TO MODIFY A SINGLE OBJECT. HERE YOU CAN CHANGE ITS POSITION RELATIVE TO THE SELECTED GRID. SOME TASKS CAN BE PERFORMED IN A STANDARD EDITOR, BUT THEIR PRESENCE HERE GIVES ADDITIONAL CONVENIENCE.

Base tab



OPTIONS

1. ROTATE COUNTERCLOCKWISE

ROTATES THE OBJECT COUNTERCLOCKWISE TO THE VALUE SELECTED IN THE SELECTION GRID AT THE BOTTOM RIGHT.

2. MOVE FRONT

MOVES THE OBJECT IN THE X (BLUE ARROW) DIRECTION TO THE VALUE OF THE SECOND SELECTION GRID

3. ROTATE RIGHT

ROTATES THE OBJECT CLOCKWISE TO THE VALUE SELECTED IN THE SELECTION GRID AT THE BOTTOM RIGHT.

4. 4x LOOP

CREATES FOUR COPIES OF AN OBJECT WITH INCREASING ROTATION. FOR EXAMPLE, TURNS A WALL INTO A ROOM.

5. MOVE LEFT

MOVES THE OBJECT IN THE OPPOSITE DIRECTION Z (RED ARROW) TO THE VALUE OF THE SECOND SELECTION GRID

6. FLIP

EXPANDING THE OBJECT IN THE CENTER BY CHANGING THE PIVOT POINT POSITION BUT NOT CHANGING THE POSITION OF THE OBJECT.

ADDS CONVENIENCE WHEN ADDING NEW BUILDINGS TO THE STRUCTURE.

7. MOVE RIGHT

MOVES THE OBJECT IN THE Z DIRECTION (RED ARROW) TO THE VALUE OF THE SECOND SELECTION GRID

8.  6X LOOP

CREATES SIX COPIES OF AN OBJECT WITH INCREASING ROTATION.

9.  MOVE UP

MOVES THE OBJECT IN THE DIRECTION *y* (GREEN ARROW) TO THE VALUE OF THE FIRST SELECTION GRID

10.  MOVE BACK

MOVES THE OBJECT IN THE OPPOSITE DIRECTION *x* (BLUE ARROW) TO THE VALUE OF THE SECOND SELECTION GRID

11.  ZERO ROTATION

SETS THE ROTATION VALUES IN ALL DIRECTIONS TO ZERO

12.  12X LOOP

CREATES TWELVE COPIES OF AN OBJECT WITH INCREASING ROTATION.

13.  DOWN

MOVES THE OBJECT IN THE OPPOSITE DIRECTION *y* (GREEN ARROW) TO THE VALUE OF THE FIRST SELECTION GRID

14.  DUPLICATE

CREATES A DUPLICATE OF THE OBJECT AND MAKES IT THE PARENT OF THE PARENT OF THE SELECTED OBJECT. IN THE STANDARD UNITY, THE KEYBOARD SHORTCUT IS CTRL-D

15. ZERO POSITION

SETS THE POSITION VALUES IN ALL DIRECTIONS TO ZERO

16. ALIGN

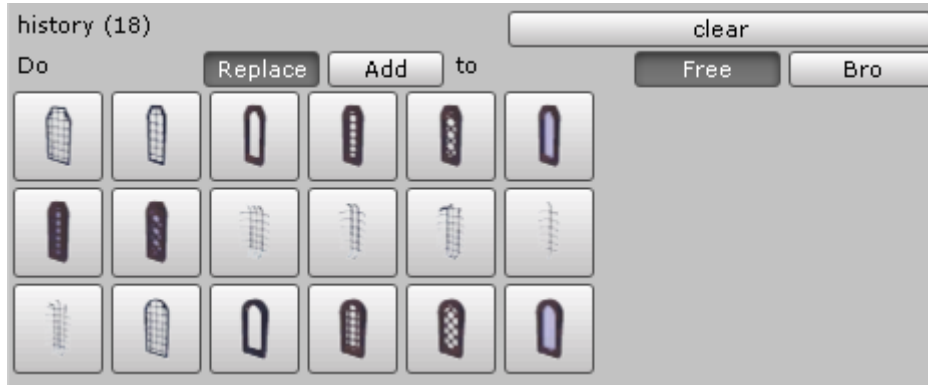
AFTER CLICKING, YOU CAN MOVE THE POSITION OF THE CURRENTLY SELECTED OBJECT TO THE NEXT SELECTED ONE.

THE RIGHT PANEL ALLOWS YOU TO SELECT THE SETTINGS FOR THE ACTIONS YOU ARE USING. 1 SELECTION GRID - VERTICAL MOVEMENT. 2 SELECTION GRID - HORIZONTAL MOVEMENT 3 SELECTION GRID - ROTATION.

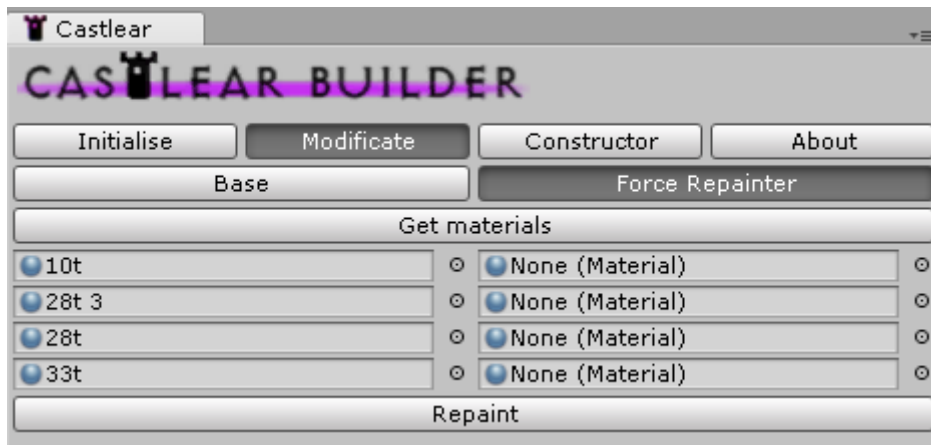
Bilding	STower	MTower
BTower	Siege	Sewers
Bilding	STower	MTower
BTower	Siege	Sewers
11.25	22.5	45
90	180	

HISTORY

Allows you to repeat actions made in the constructor



FORCEPAINTER



FORCEPAINTER allows you to quickly replace materials from all the children of the selected object. It is extremely useful for quickly repainting objects with a large number of children. For example, it is indispensable for changing materials in buildings. Does not change the material of the selected parent object.

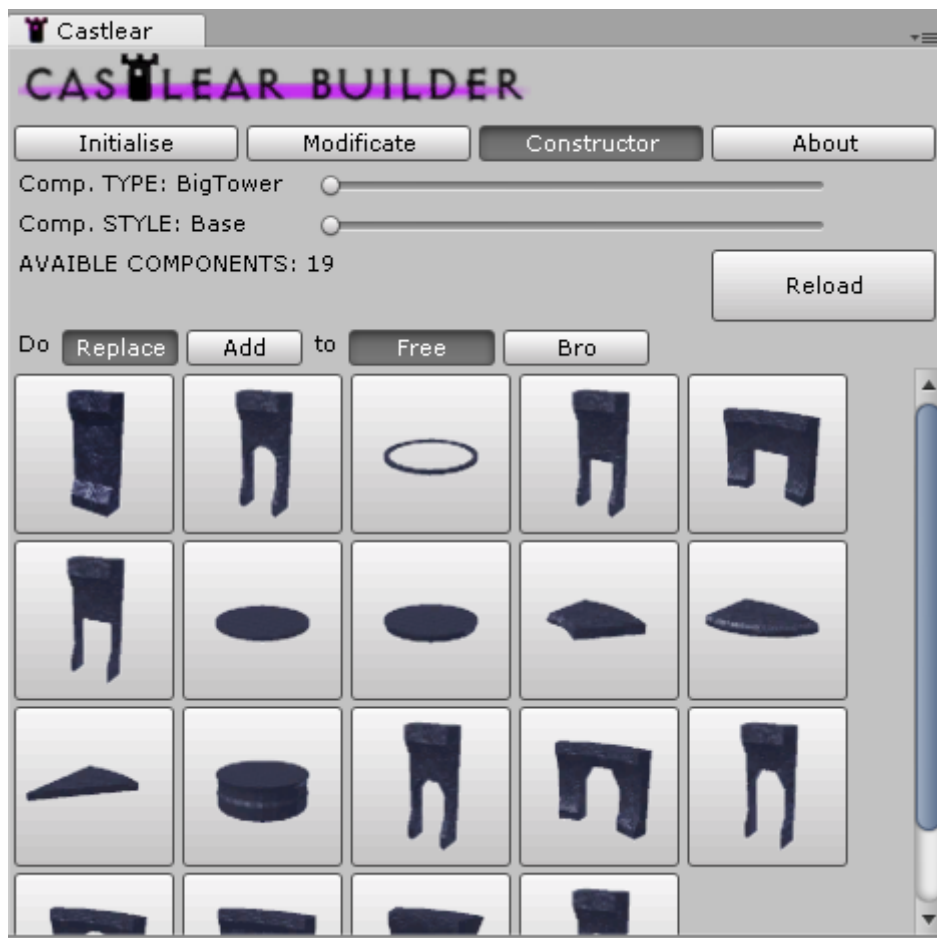
Change the material on the left fields all the children to the material on the right.

To use, select the main parent and click on "Take materials". Then assign substitute materials in front of the replaced ones in the corresponding right fields. If the field is empty, there will be no replacement. Then you need to click "Repaint" and the job is done

For reuse on the same object, you must click again "Take materials"

AFTER REPAINTING, YOU CAN CHOOSE OTHER GAMING WITH CHILDREN
AND NO PRESS "GET MATERIALS" IF THERE IS A REPLACEMENT
MATERIAL AMONG THEM, THEN YOU CAN ALSO REPAINT THEM.

CONSTRUCTOR PANEL



Allows you to quickly replace or add objects from Castlear modules

When you first start or exit the game mode, you must click "Reload"

Limit the list of objects with the slider Comp. Type to select the desired module.

Limit the list of objects with the slider Comp. Style to choose the subject of displayed objects

CLICK ON THE OBJECT ICON TO REPLACE THE SELECTED OBJECT, IF YOU SELECT THE OPTION TO ("REPLACE") OR ADD ("ADD") THE OBJECT TO THE POSITION OF THE SELECTED OBJECT.

IN THE "MODIFY" TAB AT THE BOTTOM, THERE IS AN OPTION, "HISTORY" THAT STORES LINKS TO OBJECTS THAT YOU ADDED / REPLACED. YOU HAVE ALL THE FUNCTIONALITY OF THE CONSTRUCTOR FOR ALL COMPONENTS THAT HAVE ALREADY BEEN CALLED, INCLUDING THE CHOICE OF THE PARENT. THE MAXIMUM HISTORY SIZE IS 18 COMPONENTS.

CHANGE THE VALUE TO SELECT THE PARENT OF THE NEW OBJECT

FREE – NO PARENT

BRO – THE PARENT IS EQUAL TO THE PARENT OF THE SELECTED

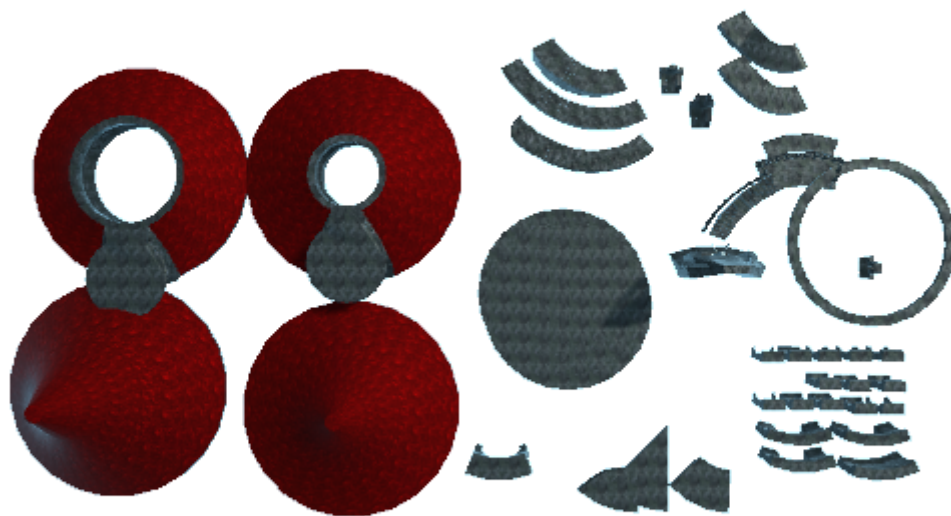
CHILD – THE PARENT WILL BE SELECTED (NOT AVAILABLE WHEN REPLACING)

STANDARD MODULES INCLUDED IN THE ASSET



NUMBER OF COMPONENTS 48

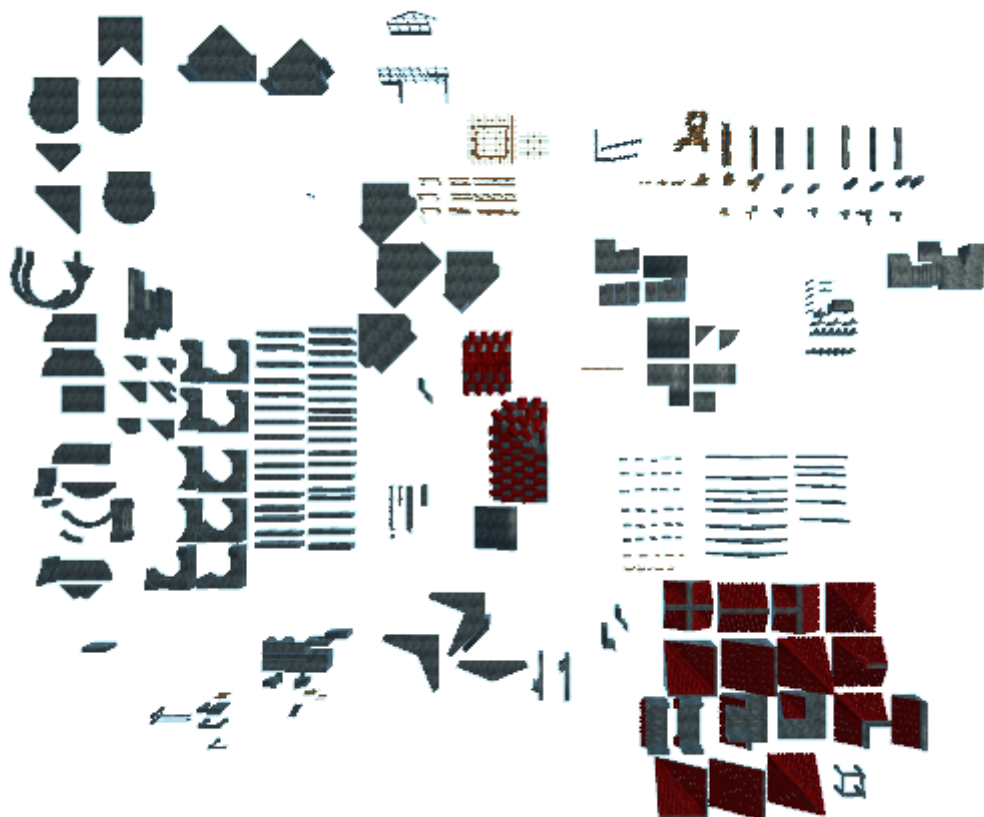
THE MODULE CONTAINS COMPONENTS FOR CREATING LARGE TOWERS. IT HAS ADAPTERS FOR SMALLER TOWERS, AS WELL AS A SIMPLE SYSTEM FOR CREATING BALCONIES AND EXTERNAL STAIRCASES.





NUMBER OF COMPONENTS 249

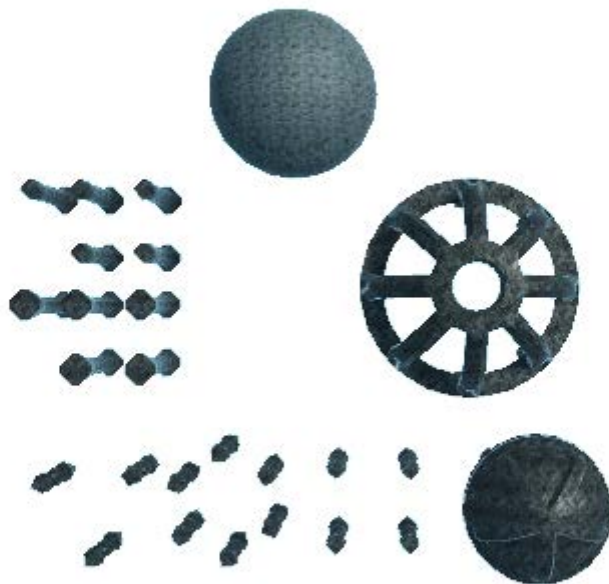
THE MODULE CONTAINS A LARGE NUMBER OF COMPONENTS FOR CREATING RECTANGULAR BUILDINGS FOR EVERY TASTE. IN ADDITION TO THE WALLS OF A STANDARD SIZE, IT HAS HALF-SIZED WALLS. IT CONTAINS 3 TYPES OF ROOFS, SEVERAL SHELF COMPONENTS FOR WAREHOUSES / LIBRARIES, A VARIETY OF ADAPTERS AS WELL AS USEFUL LATTICES AND MUCH MORE.





NUMBER OF COMPONENTS 12

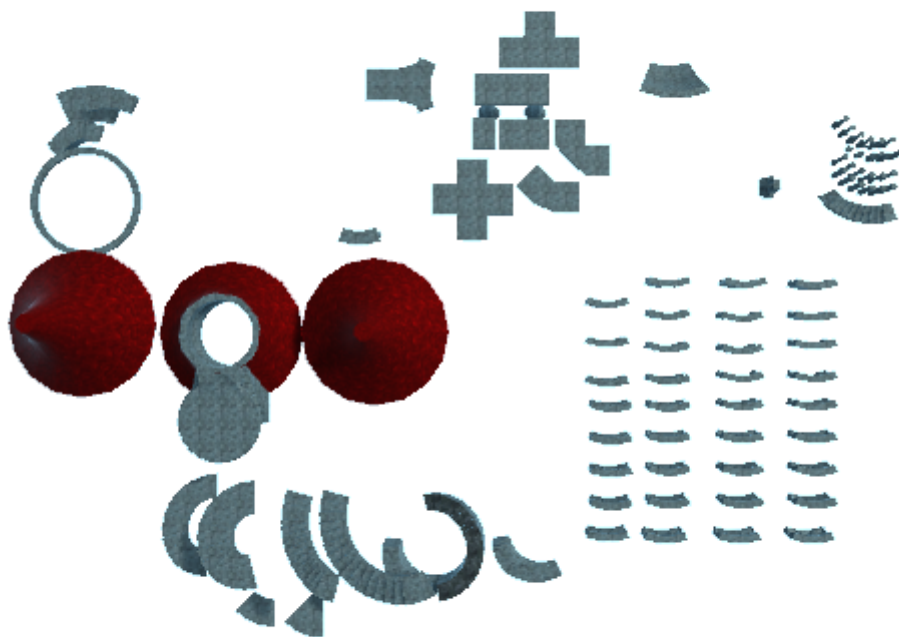
A SMALL SET OF EXTERNAL COLUMNS AND STRUCTURES.





NUMBER OF COMPONENTS 69

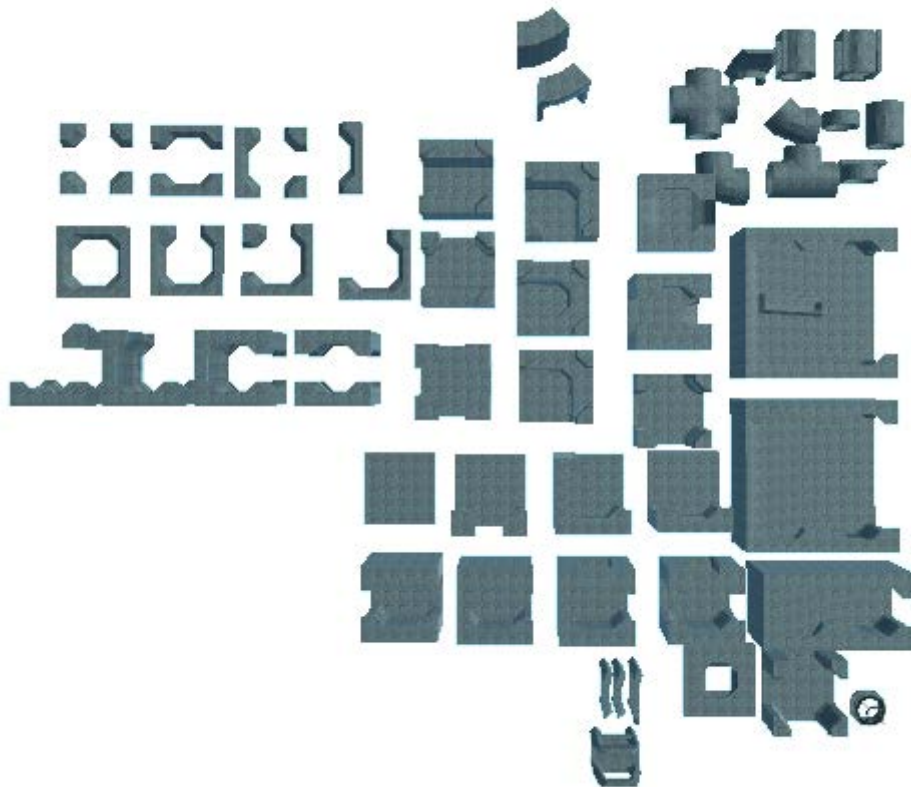
A MODULE FOR THE CREATION OF MEDIUM-SIZED TOWERS. IT HAS AN ADAPTER FOR SMALL TOWERS. ALSO IN THE SET THERE ARE INTERNAL COLUMNS, A SET OF SUSPENSION BRIDGES AND A STANDARD SET OF EXTERNAL AND INTERNAL PLATFORMS AND STAIRS.





NUMBER OF COMPONENTS 51

SEWERS IS A MODULE FOR CREATING ANTHROPOGENIC DUNGEONS, SEWERS AND CATACOMBS. IT HAS ADAPTERS FOR THE BUILDER, LARGE TOWERS, A SET OF SEWER PIPES, SPECTACULAR FLIGHTS AND OPPORTUNITIES FOR CREATING LARGE ROOMS.





NUMBER OF COMPONENTS 50

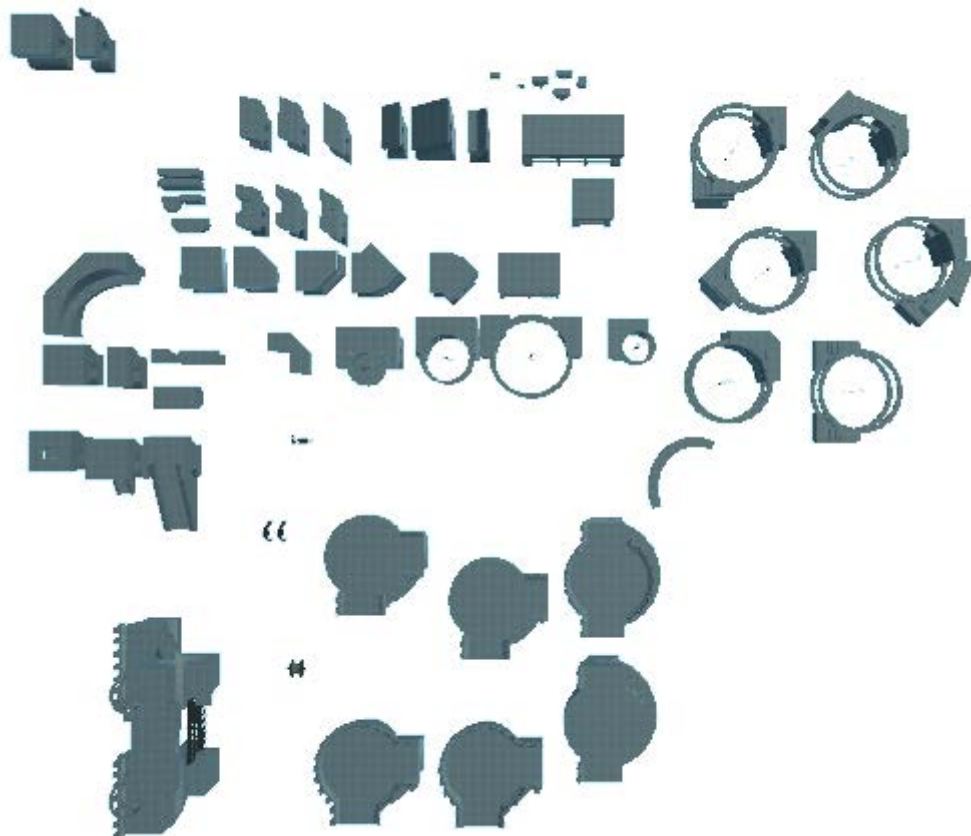
SMALL TOWER PROVIDES A SET OF COMPONENTS FOR CREATING SMALL TOWERS, SPIERS, FLAG, A LOT OF EXTERNAL AND INTERNAL COMPONENTS. FOR A BETTER REPRESENTATION OF THE FLAG, IT IS RECOMMENDED TO INSTALL TWO-SIDED MATERIAL AND CONNECT TO IT THE STANDARD COMPONENT "CLOTH".





NUMBER OF COMPONENTS 52

SIEGE WALLS PROVIDES MANY COMPONENTS FOR THE CREATION OF SIEGE WALLS AND TOWERS. AN INDISPENSABLE SOLUTION FOR CREATING FORTRESSES AND CASTLES. IT HAS MANY ADAPTERS TO STANDARD MODULES, STAIRS AND BUILT-IN STRUCTURES.



AFTERWORD

IF YOU BUY CASTLEAR BUILDER LOOK AT STRUCTURES IN DEMO SCENE.

IN THE NEAR FUTURE YOU WILL BE ABLE TO FIND ADDITIONAL MODULES FOR THE CASTLEAR BUILDER IN THE UNITY ASSET STORE

FOR ALL QUESTIONS, REQUESTS, SUGGESTIONS AND ERRORS FOUND, CONTACT E-MAIL

BLACKBIRDREDBIRD@OUTLOOK.COM

CREATE BEAUTIFUL GAMES AND APPLICATIONS IN SPITE OF NO OBSTACLES.

DMITRIY GRAY 2018