BAB III

UNITY & CARA KERJA

Unity adalah sebuah game engine cross platform yang dibuat oleh Unity Technologies, sebuah perusahaan yang berpusat di San Fransisco. Unity dapat membuat game untuk beberapa platform, diantaranya PC, smartphone, console dan perlengkapan VR. Unity bisa digunakan untuk membuat game 3D maupun 2D, dan Unity juga dipakai di indusrtri – industri lain selain game, meskipun Unity lebih dikenal untuk membuat beberapa game dari tim indie, seperti Cuphead, Fall Guys, Hollow Knight dan masih banyak lagi.

|  |  |
| --- | --- |
| **(a)** | **(b)** |

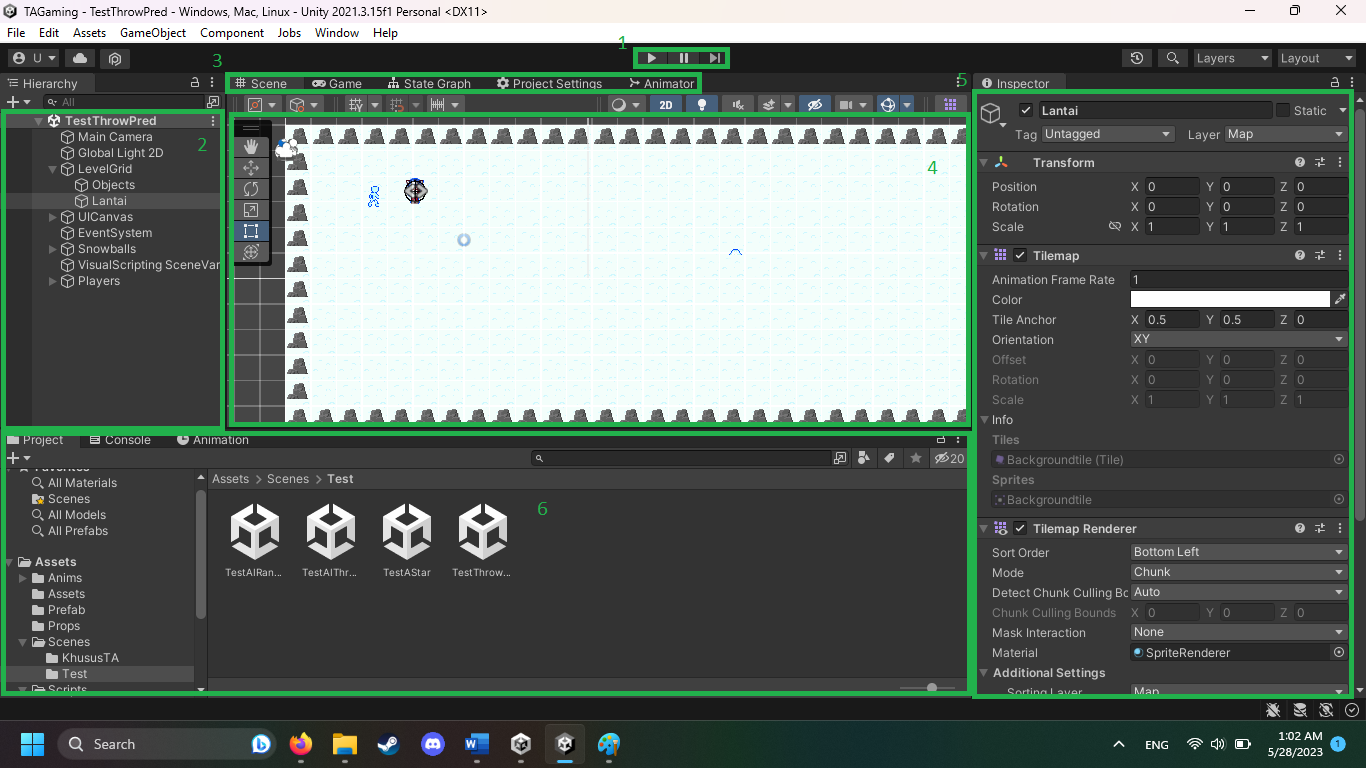
Gambar 3.1

Logo Unity (a) sebelum 2021 dan (b) dari 2021 hingga sekarang

Dalam bab ini akan dijelaskan konsep – konsep dan tahap – tahap yang diperlukan untuk membuat sebuah game, dalam kasus ini sebuah game 2D. Hanya akan dijelaskan subjek – subjek yang berhubungan dengan tugas akhir dikarenakan banyaknya pilihan yang disediakan oleh Unity. Subjek yang dijelaskan adalah sebagai berikut :

1. UI & Scene

Unity sebagai sebuah aplikasi memiliki sebuah UI yang cukup sederhana untuk tidak mengacaukan layar, tapi juga cukup rumit untuk memberi informasi yang diperlukan oleh developer. Secara default, Unity akan memiliki beberapa window seperti yang ditunjukkan gambar 3.X dibawah ini. Setiap window dapat dipindah – pindah dan bisa membuat window baru bila diinginkan, dengan default 4 window.



Gambar 3.X

UI Unity

Gambar 3.X diatas adalah UI Unity secara default saat dibuka, tidak termasuk kotak – kotak yang digambar menggunakan Paint. Di UI default terdapat 6 bagian yang akan sering digunakan. Berikut adalah kegunaan dari setiap bagian dari UI diatas :

* 1 : Tombol play untuk menjalankan Scene yang sedang diedit, dengan tombol pause dan fast forward untuk mengatur laju kecepatan dari game. Berguna untuk membantu dalam melakukan debug.
* 2 : Tab Hierarki yang berisi semua Game Object yang ada di dalam Scene yang sekarang ini diedit
* 3 : Secara default berisi tab scene yang digunakan untuk melihat dan mengedit scene kita dan tab game yang digunakan untuk melihat tampilan scene kita sesuai di dalam game. Window lain bisa di drag ke sini dan akan muncul di kanan kumpulan tab.
* 4 : Isi dari scene yang dipilih, tempat seluruh pembuatan scene dibuat.
* 5 : Tab detail yang sesuai namanya berisi seluruh detail dari sebuah Game Object, akan dijelaskan di subbab selanjutnya.
* 6 : Tab Project yang berisi folder dan file – file asset dan script yang dipakai.

1. Game Object

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Themes and styles also help keep your document coordinated. When you click Design and choose a new Theme, the pictures, charts, and SmartArt graphics change to match your new theme. When you apply styles, your headings change to match the new theme :

* Xbanner
* Outdoor banner
* Rollup Banner

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1. Prefab
2. Collision Detection
3. Script
4. Shader Graph
5. Tilemap & Rule Tile
6. UI & Navigasi
7. **Layout Booklet**

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|  |  |
| --- | --- |
| **(a)** | **(b)** |

Gambar 3.1

Gambar Elang (a) Elang Normal. (b) Setelah Diberi Filter

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1. **X-Banner**

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|  |  |
| --- | --- |
| **(a)** | **(b)** |
| **(c)** | **(d)** |

Gambar 3.2

Gambar Elang (a) Elang Normal. (b) Setelah Diberi Filter BW. (c) Filter Kuning. (d) Filter Hijau

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1. Desain Database

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1. Desain Procedural

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Algoritma 3.1 Contoh Algoritma Cek Prima

1. SREAD N
2. C = 0
3. FOR I = 2 TO N-1
4. IF N mod I = 0
5. C = C + 1
6. END IF

**Algoritma 3.1 (Lanjutan)**

1. END FOR
2. IF C = 0
3. WRITE “PRIMA”
4. ELSE
5. WRITE “BUKAN PRIMA”
6. END IF

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Algoritma 3.2 Contoh Algoritma Membedakan Ganjil dan Genap

1. Read N
2. IF N mod 2 = 1 THEN
3. A = GANJIL
4. ELSE
5. A = GENAP
6. END IF
7. WRITE A

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L = s x s (3.1)

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(3.2)

(3.3)

(3.4)

Keliling = 4 x s (3.5)

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