

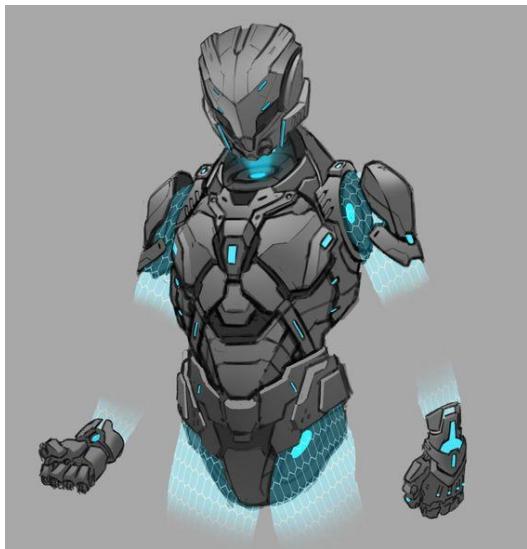
Laporan/Dokumentasi Tugas Akhir 3D

Miftakhul Huda Adriyawan

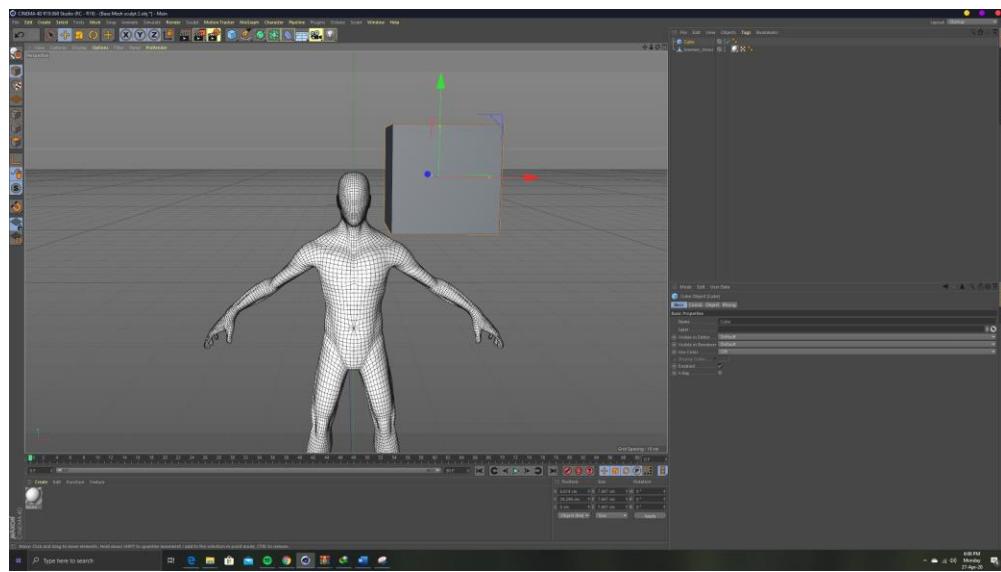
17.82.0177

TI-04

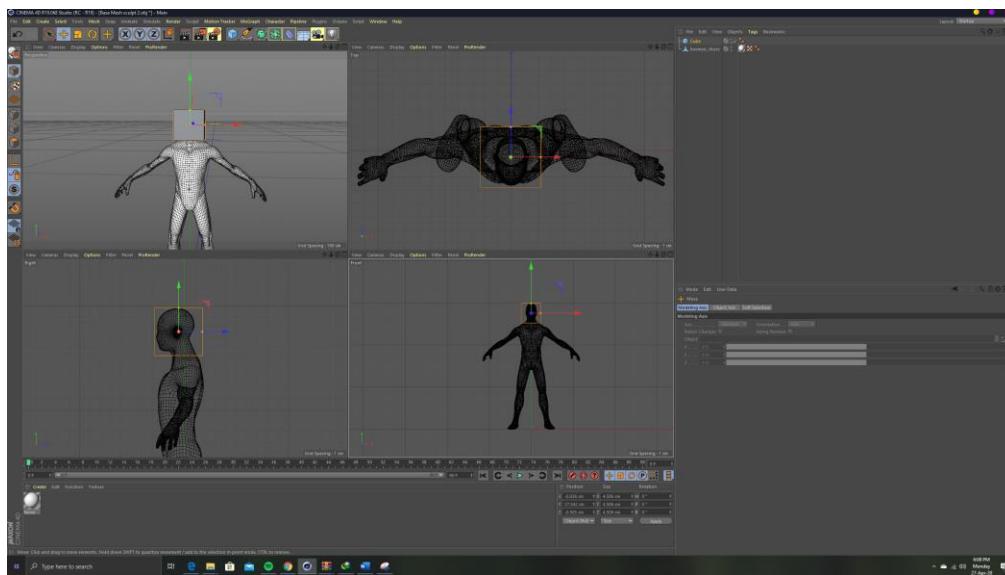
Concept



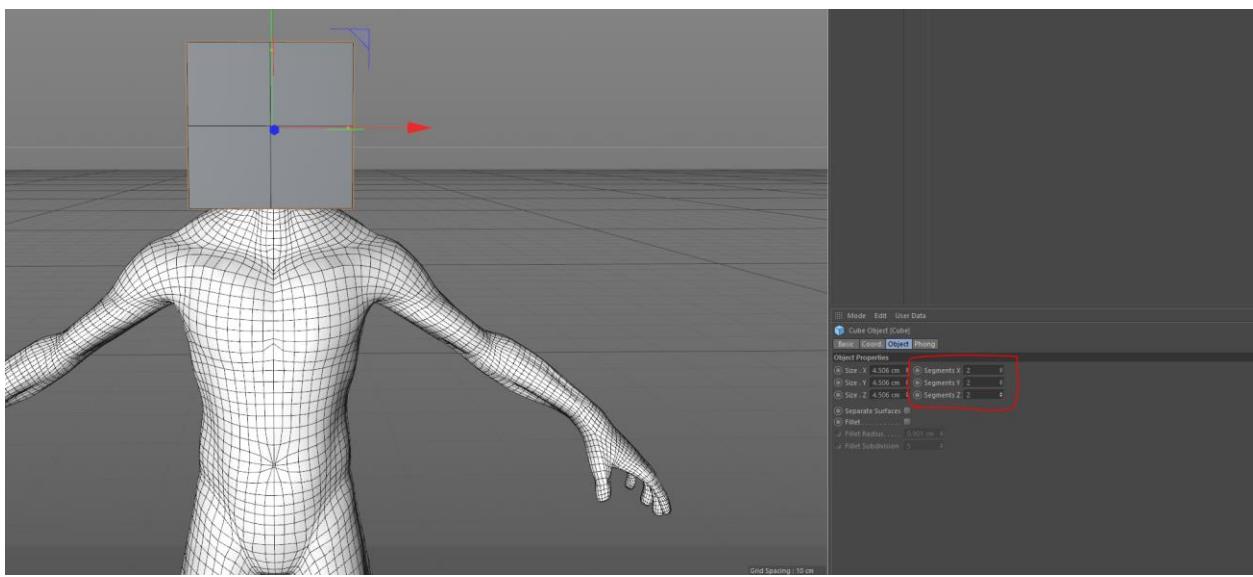
1. Kepala



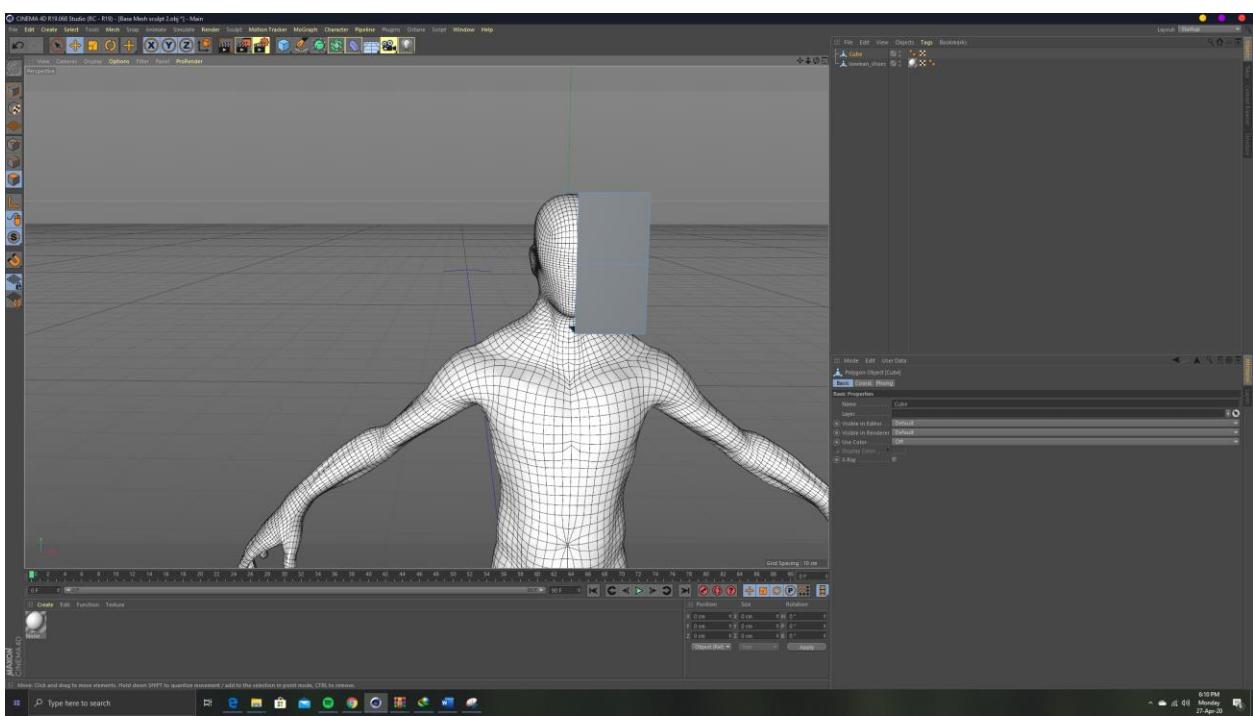
Buat cube polygon sebagai bentuk dasar kepala



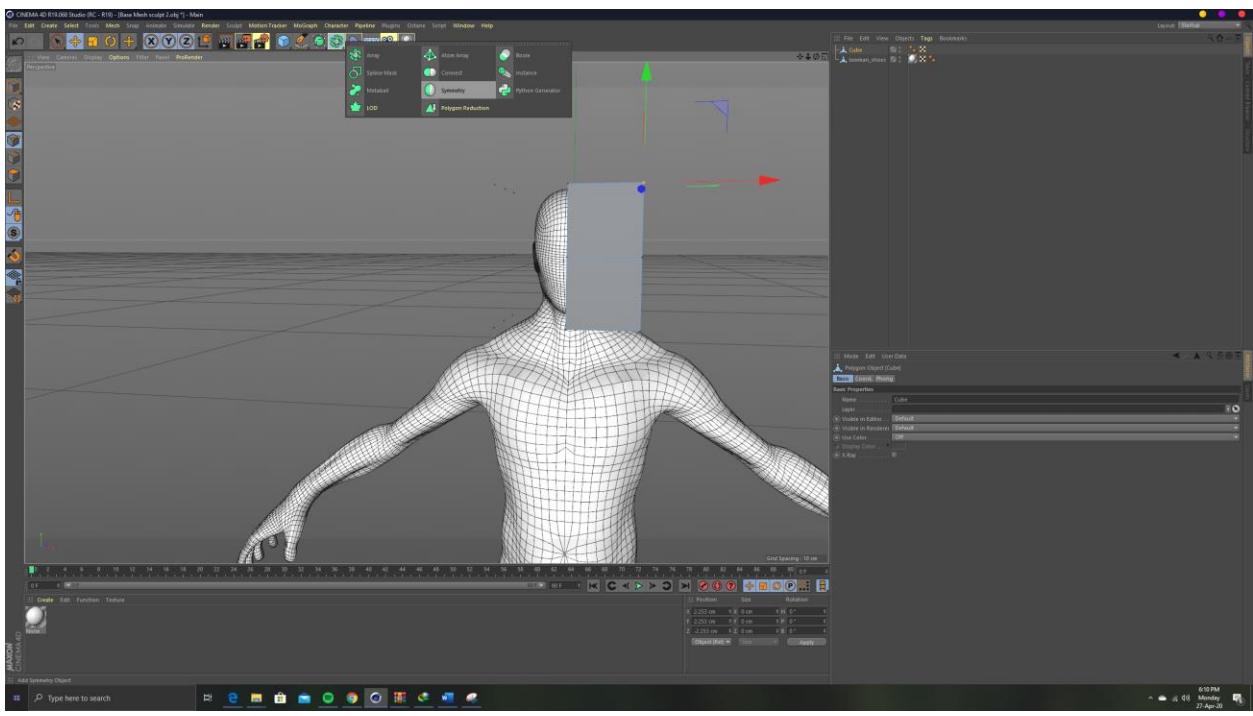
Sesuaikan dengan posisi kepala



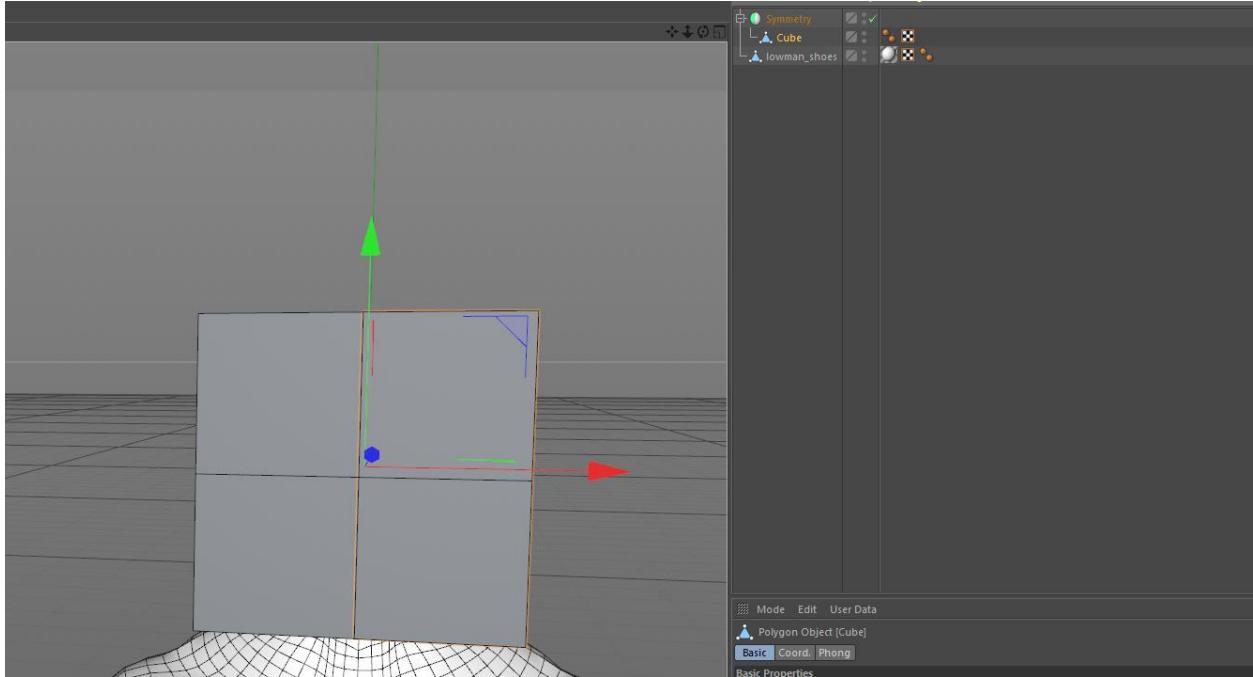
Atur segment dari cube



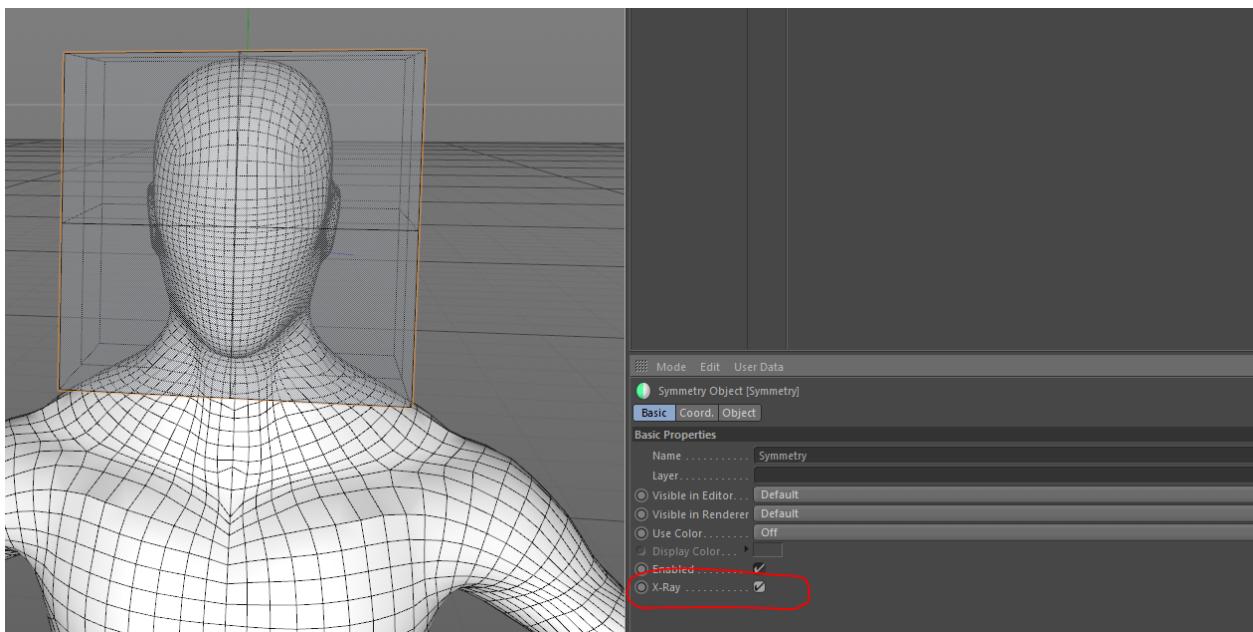
Hapus separuh dari cube



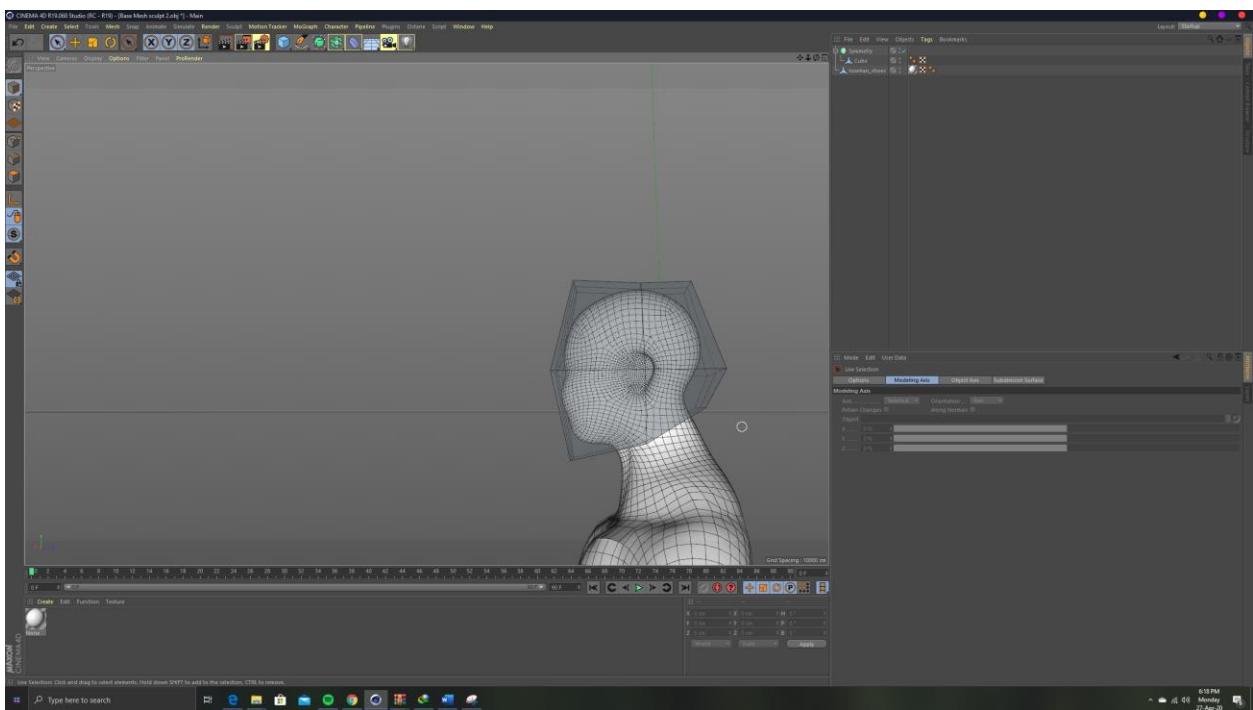
Buat simetri cube yang ada, untuk memudahkan dalam proses modelling hanya dengan focus satu sisi



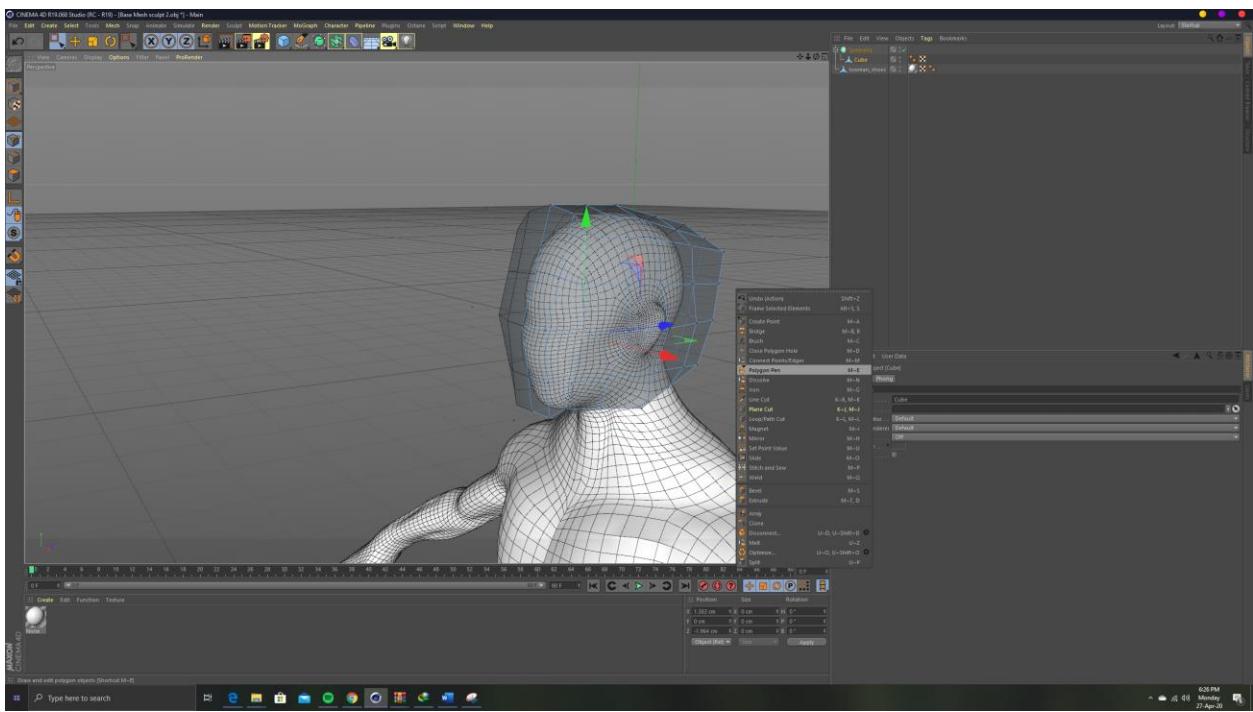
Cube akan Kembali utuh



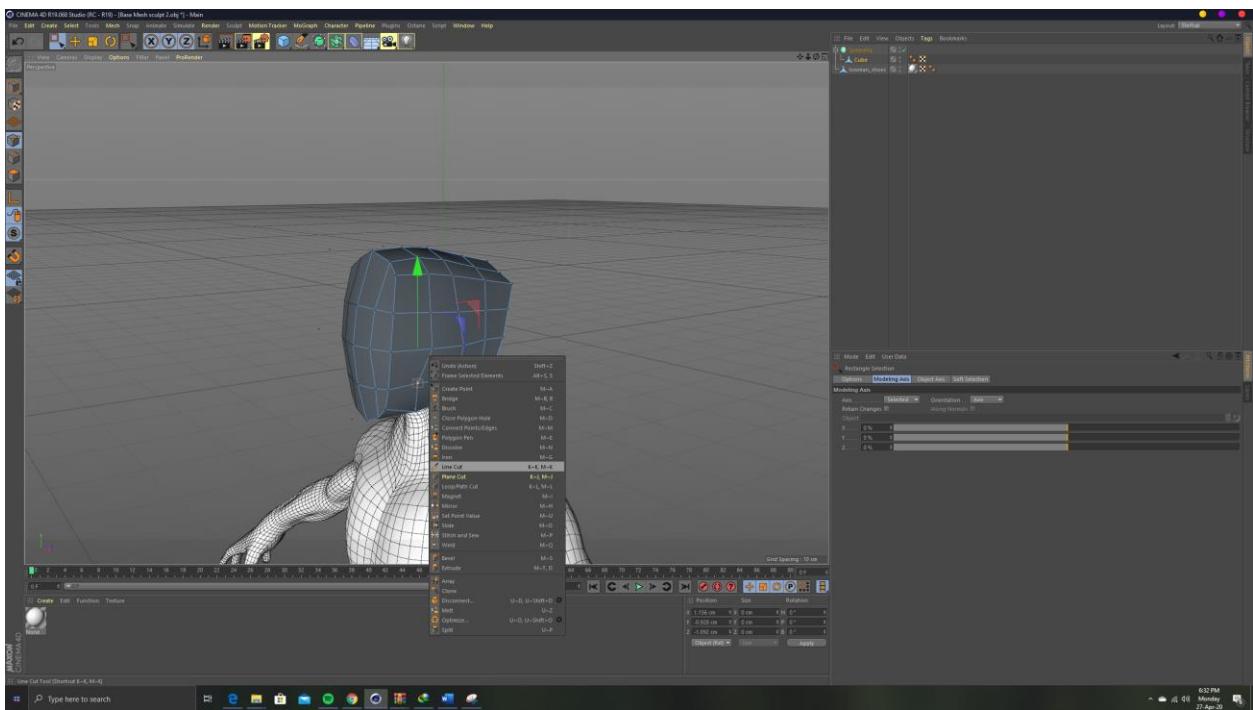
Pada symmetry object aktifkan mode X-Ray supaya cube tembus pandang



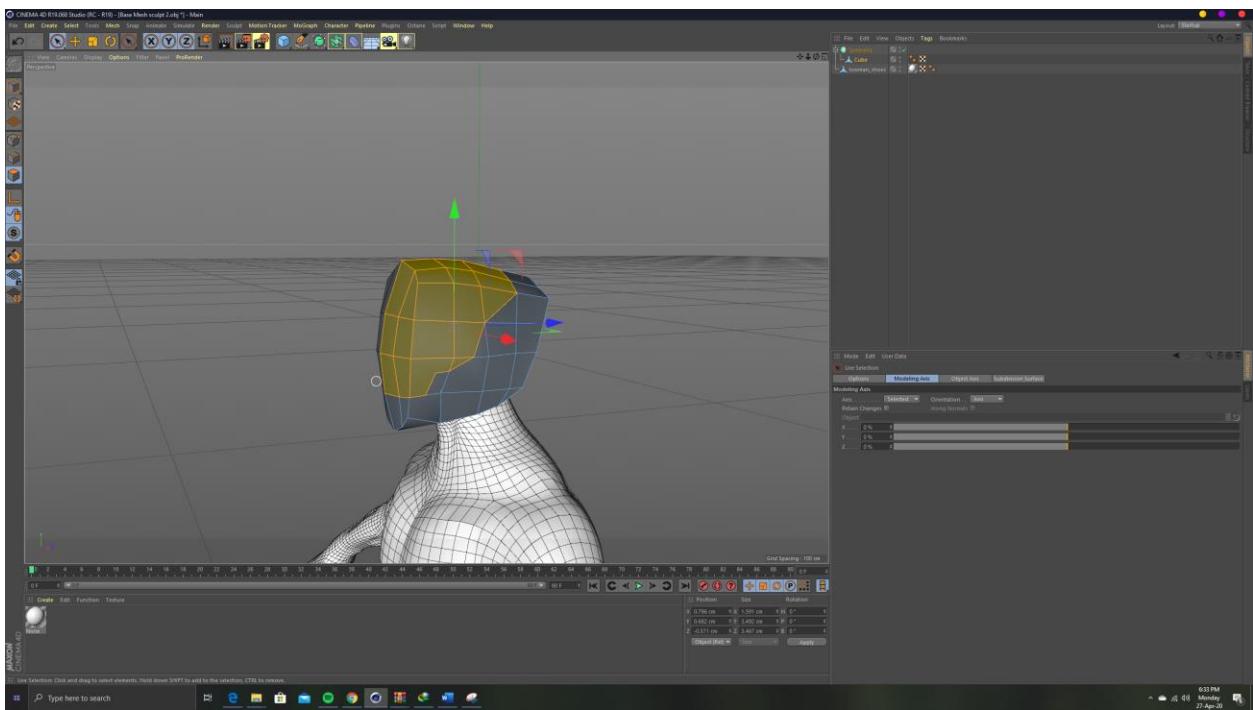
Atur dan modifikasi cube hingga membentuk seperti kepala



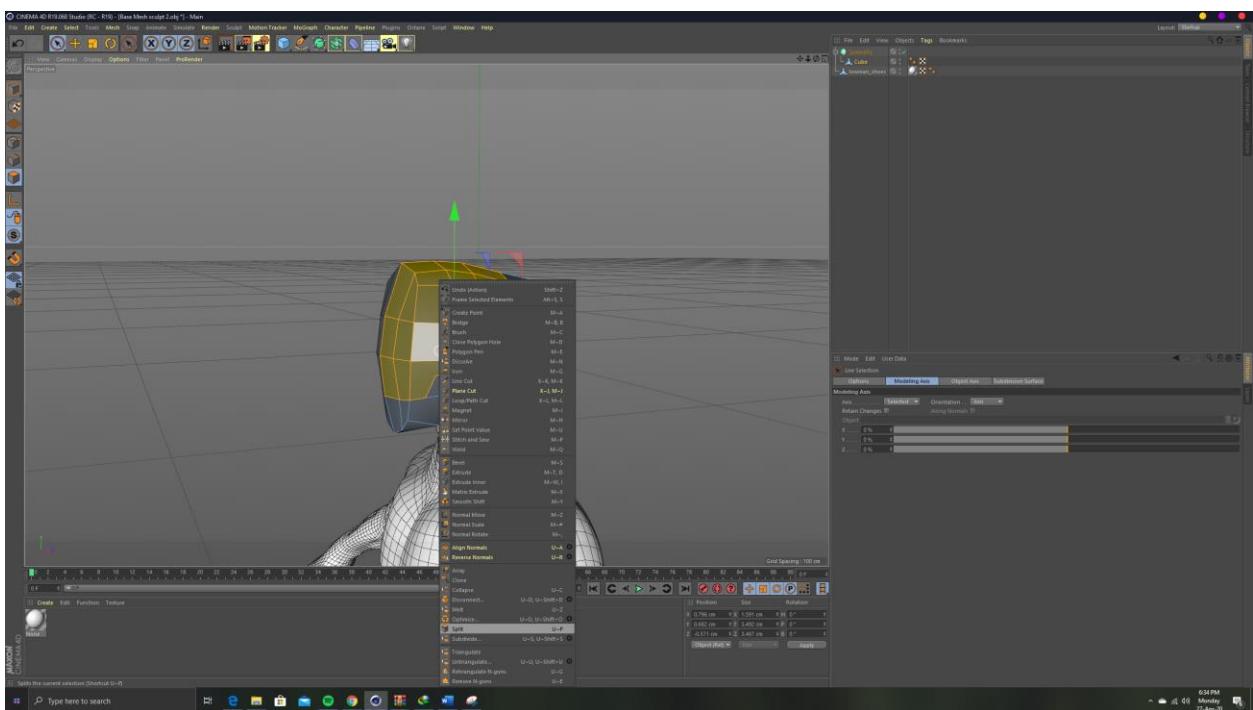
Tambah edges menggunakan polygon pen



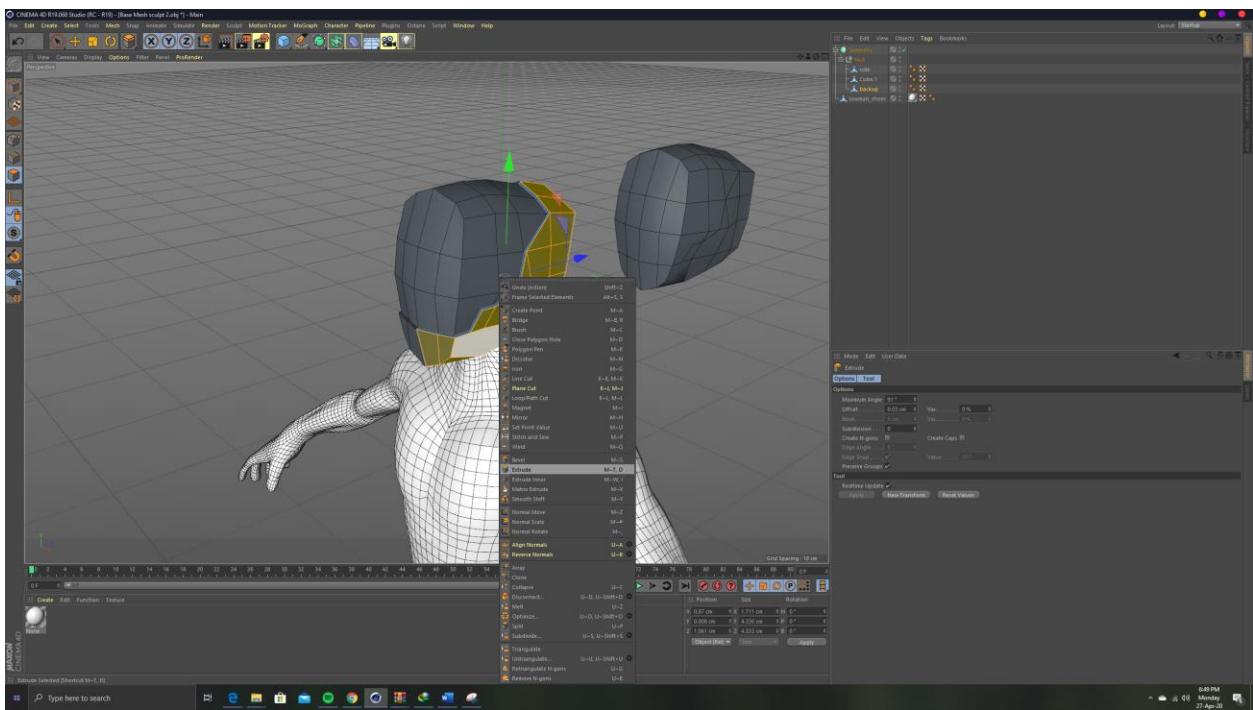
Buat potongan edges dengan line cut untuk membuat bagian kaca helm



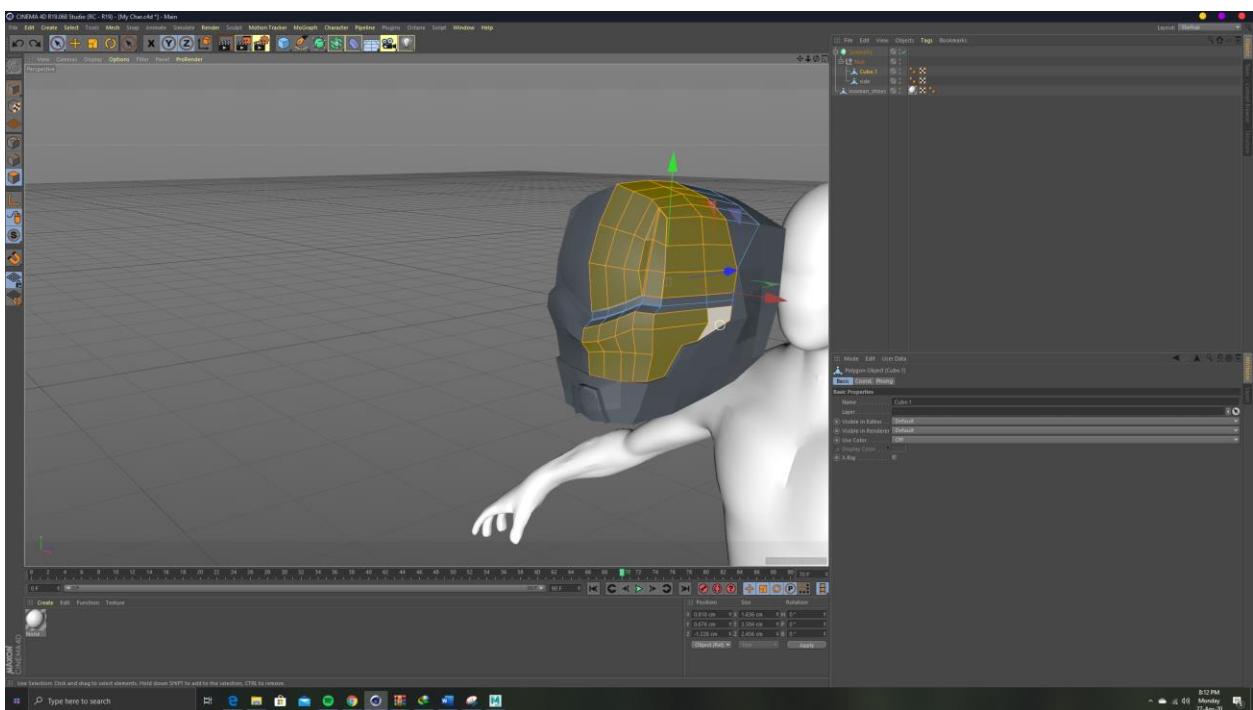
Seleksi face dari hasil potongan edges



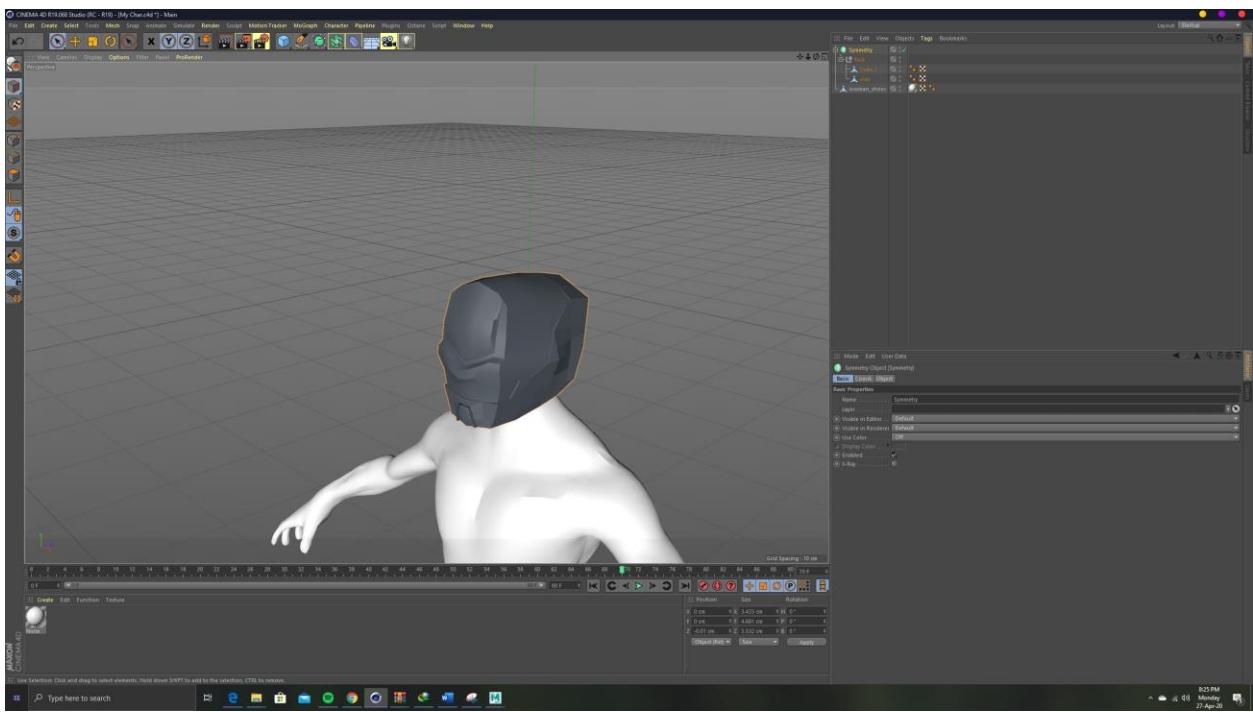
Split untuk memisahkan menjadi 2 bagian, atas dan bawah



Bagian bawah di extrude untuk menciptakan dimensi

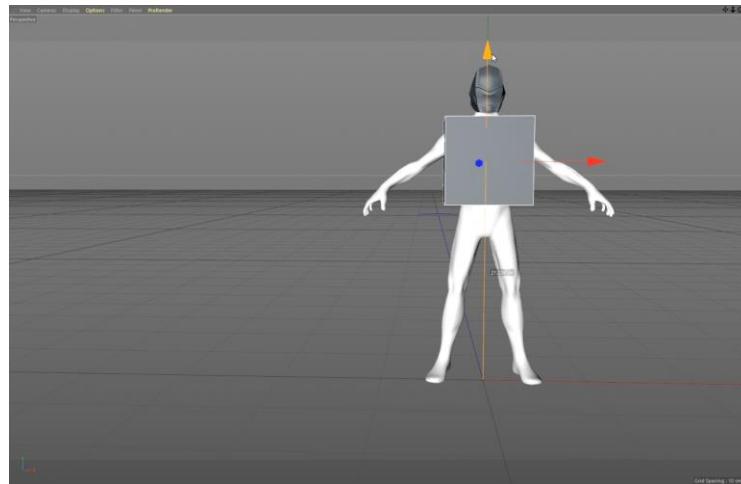


Atur dan modifikasi face dengan metode extrude, bevel

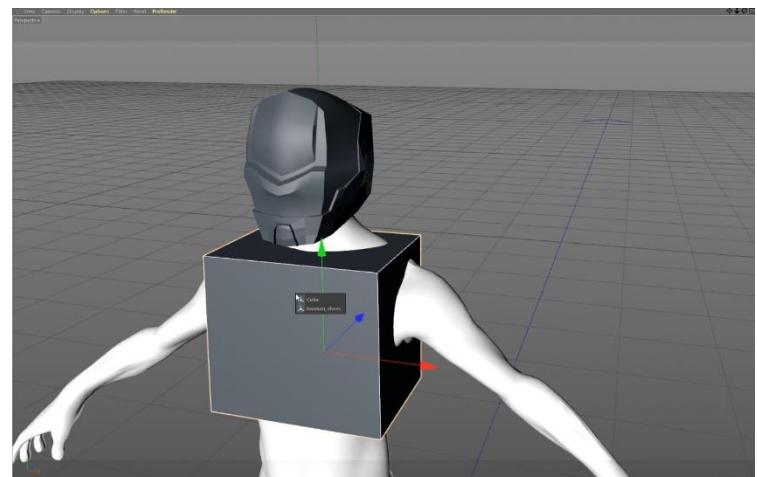
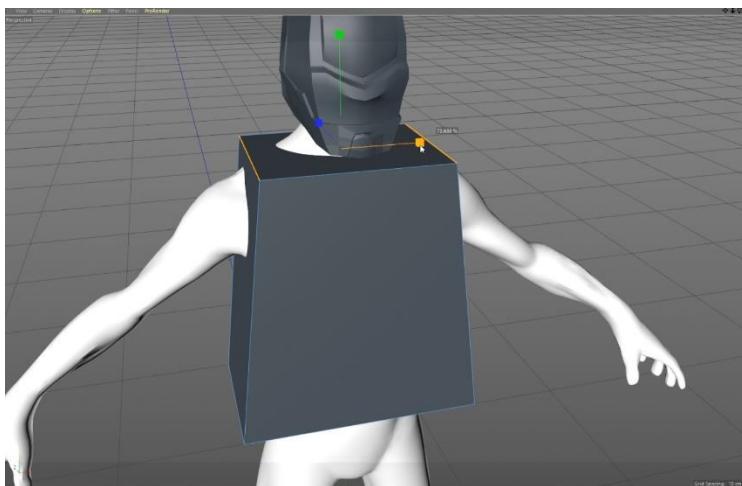


Posisikan Kembali ke kepala, dan jadi deh

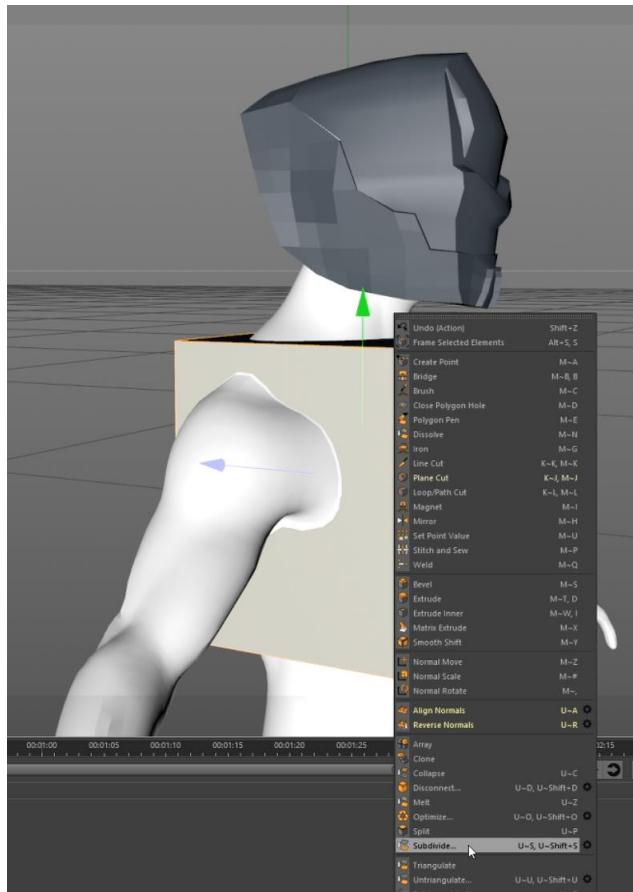
2. Armor Dada



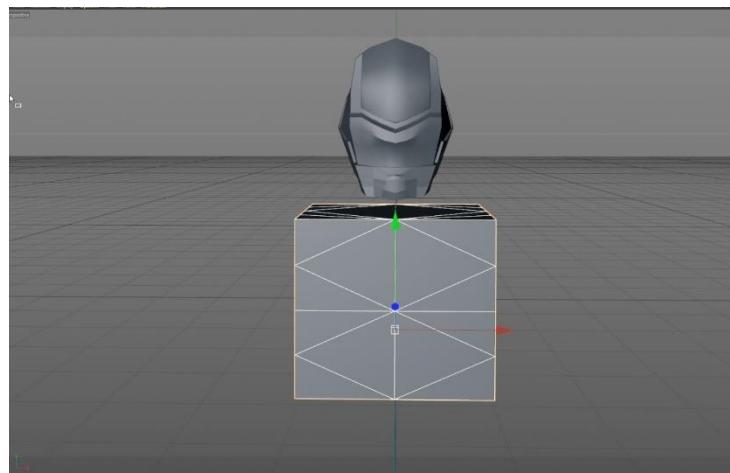
Buat cube object, tempatkan di bagian dada



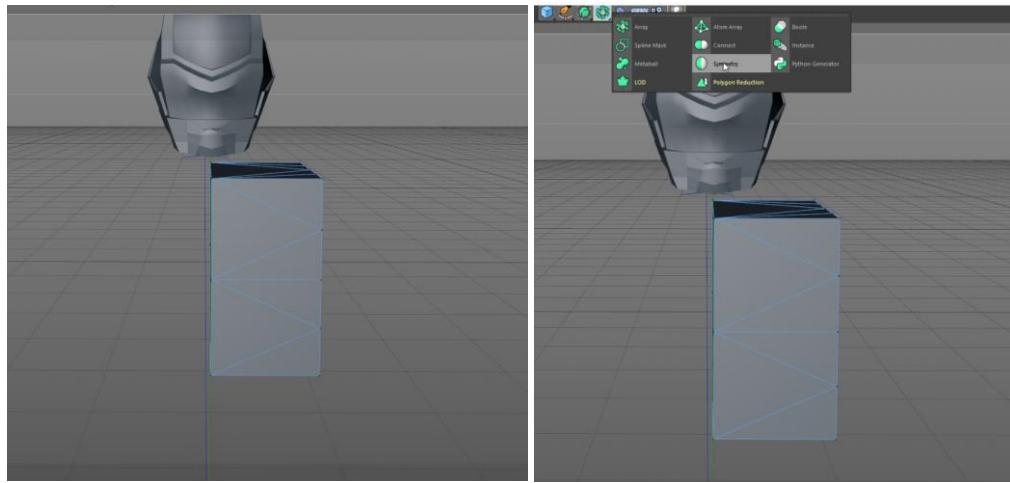
Atur/resize hingga sesuai dengan tinggi dada



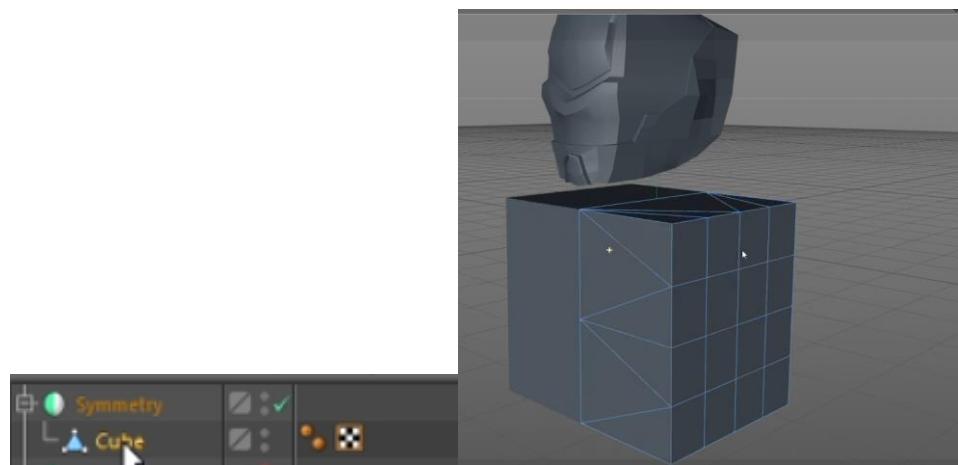
Select semua face lalu pilih subdivide untuk menambahkan line secara proporsional



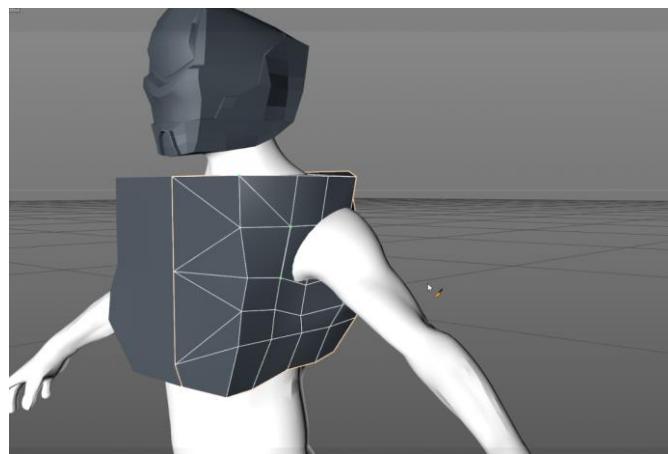
Hasilnya akan seperti ini



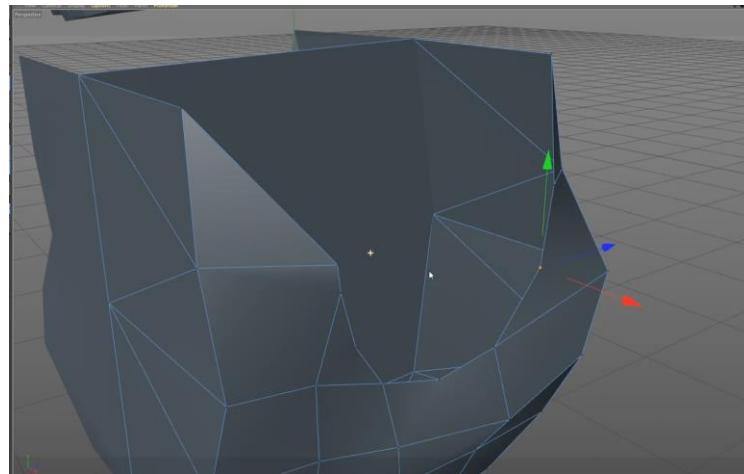
Potong setengah bagian, kemudian tambahkan symmetry object



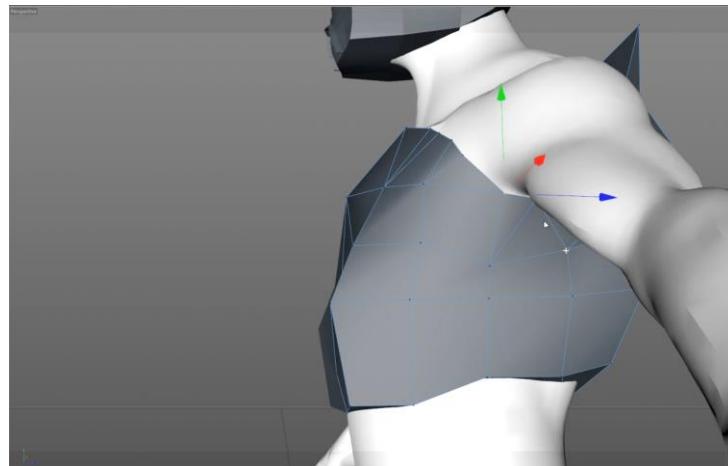
Drag object cube ke object symmetry, maka cube akan kembali utuh. Dengan symmetry ini hanya perlu edit satu bagian saja, bagian lainnya akan otomatis mengikuti bagian yg tersimetri



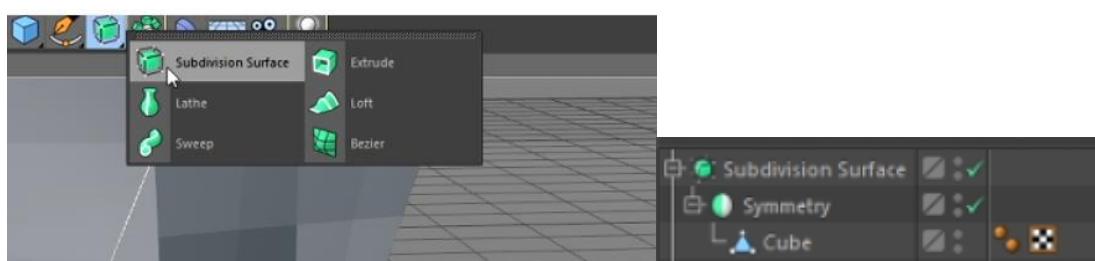
Atur edges/point/face hingga menyesuaikan postur dada



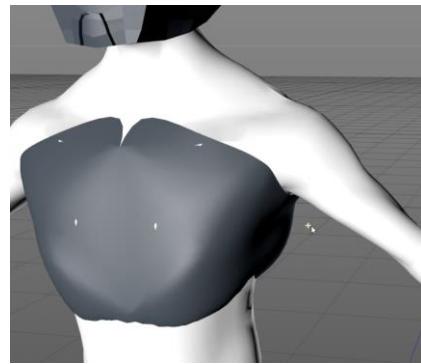
Potong bagian lengan



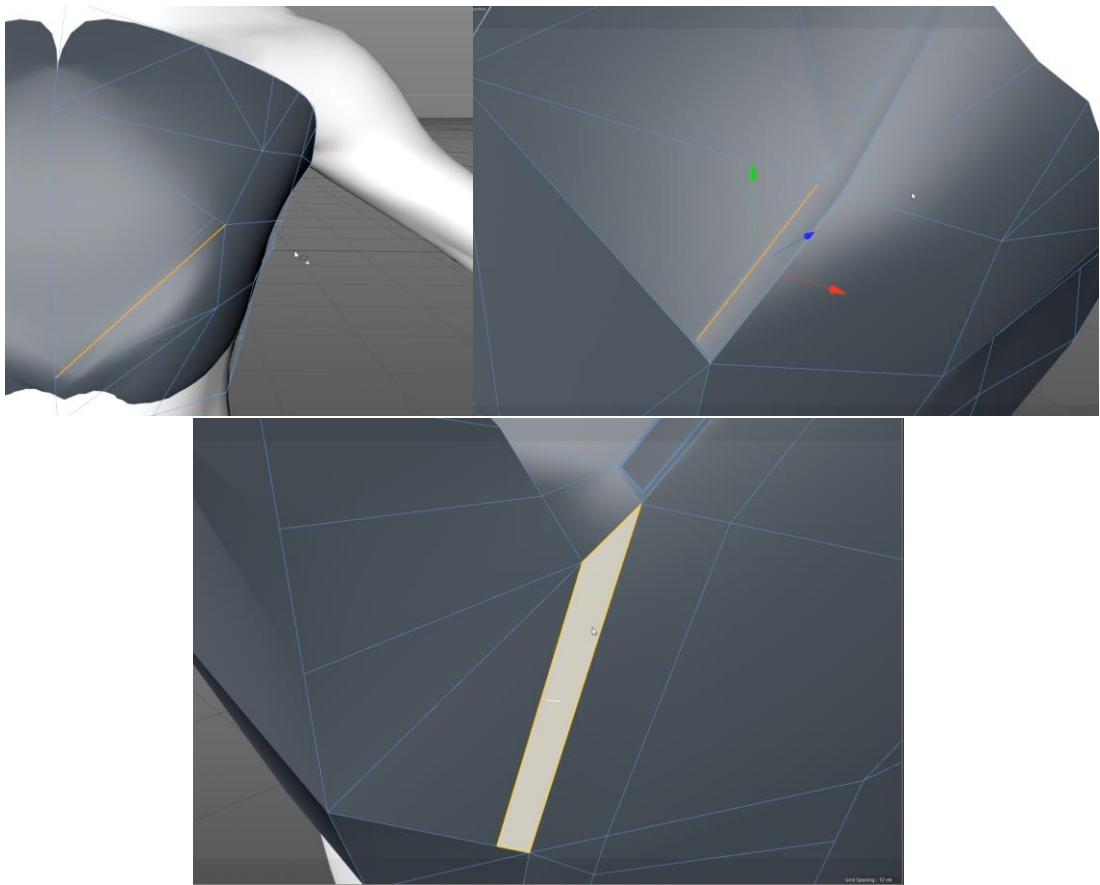
Tambahkan point dengan create point dan atur bagian ketiak hingga pas



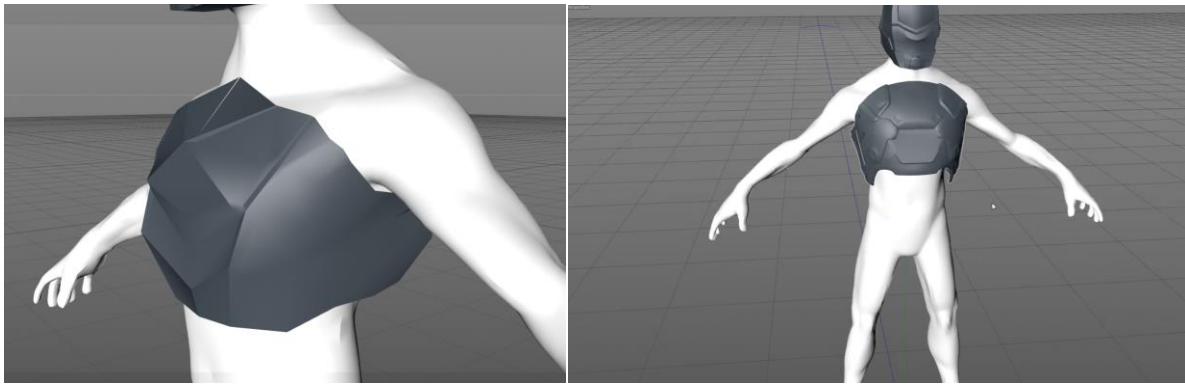
Jika sudah pas, buat subdivision surface, drag symmetry object ke subdivision surface. Maka cube akan menjadi smooth



Cube akan terlihat smooth

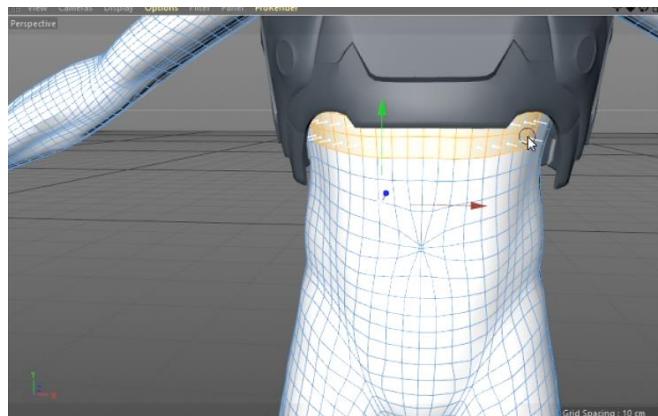


Tambahkan edges dengan polygon pen. Select faces kemudian extrude dan tambahkan bevel. Metode ini dilakukan berulang-ulang hingga mendapatkan bentuk yang diinginkan

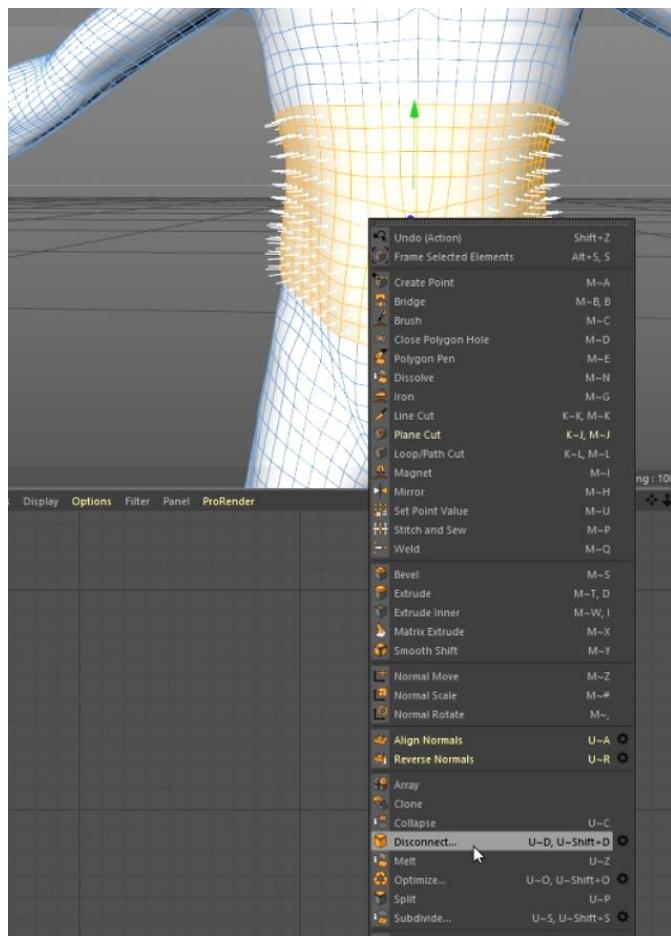


Hasil armor dada akan seperti ini

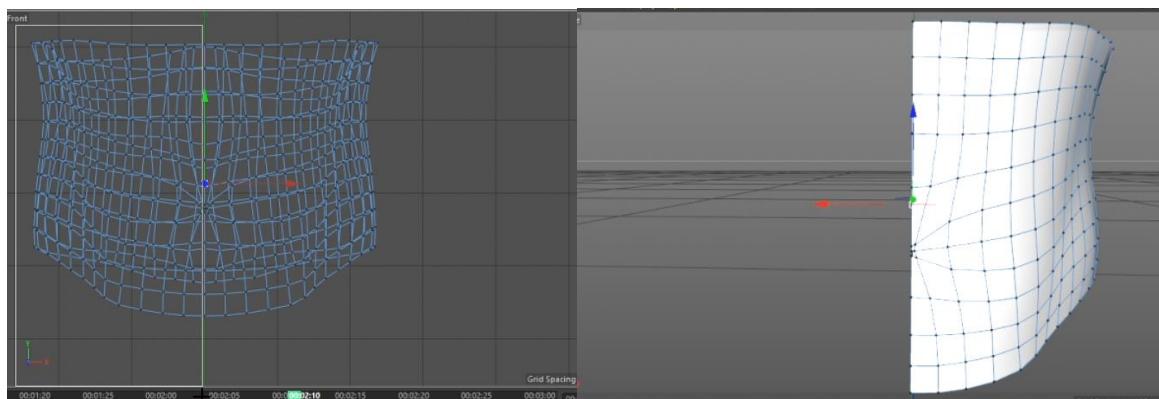
3. Armor Perut



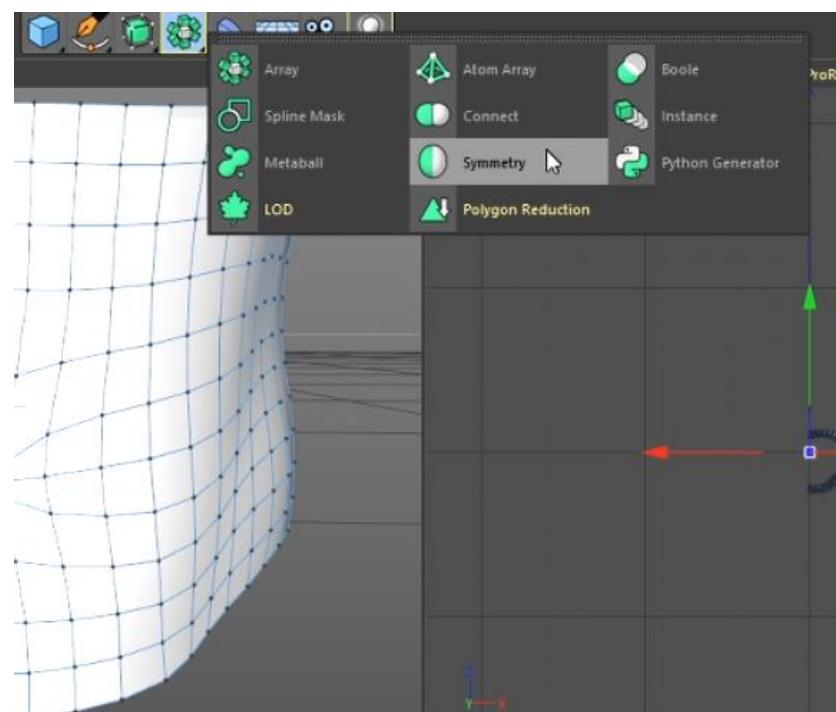
Pembuatan armor menggunakan bagian perut base model. Yaitu dengan seleksi bagian perut untuk dijadikan armor



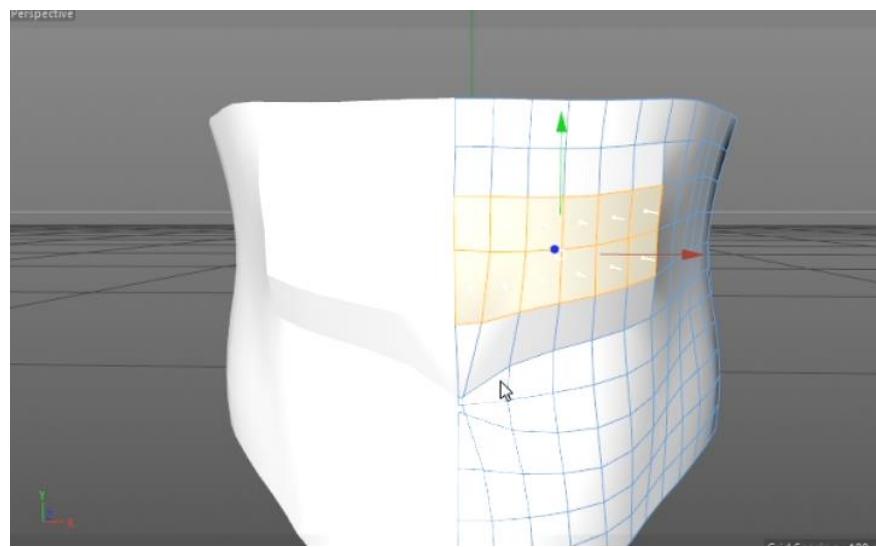
Jika sudah terpilih semua, disconnect bagian yang sudah terseleksi untuk memisahkan dengan bagian tubuh lainnya



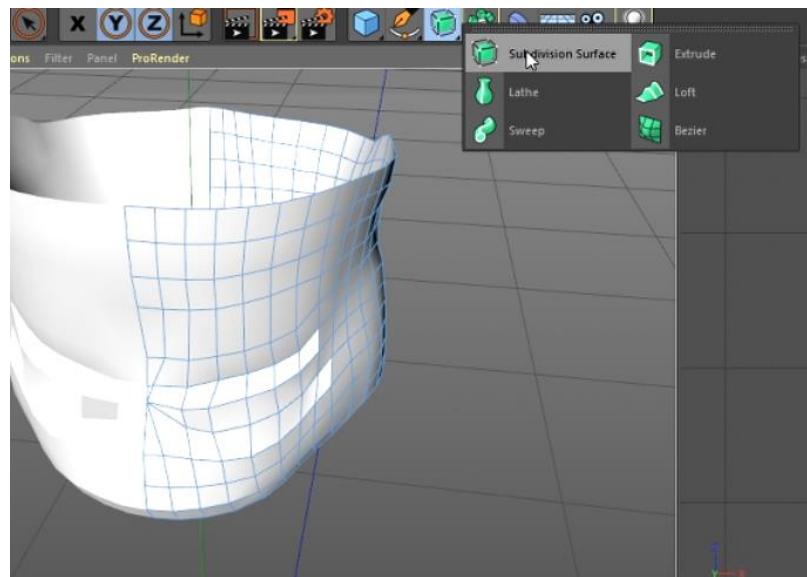
Jika sudah terpisah, seleksi setengah bagian lalu potong bagian tersebut



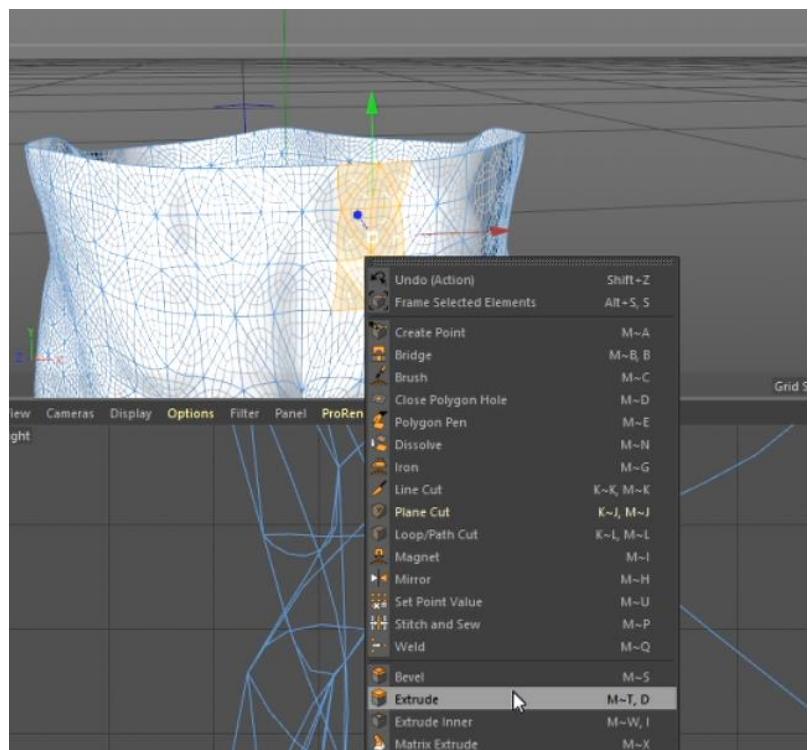
Buat symmetry object sama seperti armor dada



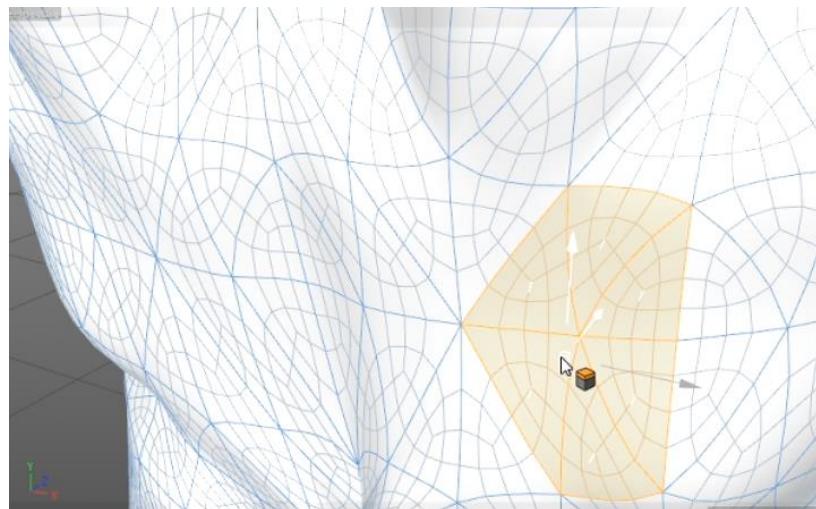
Edit hanya satu sisi saja, sesuaikan dengan keinginan



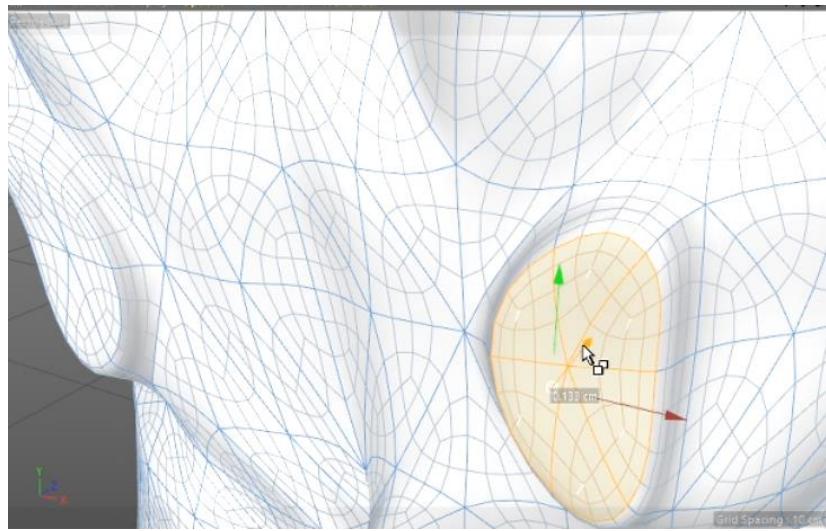
Buat subdivision surface untuk merubah menjadi smooth



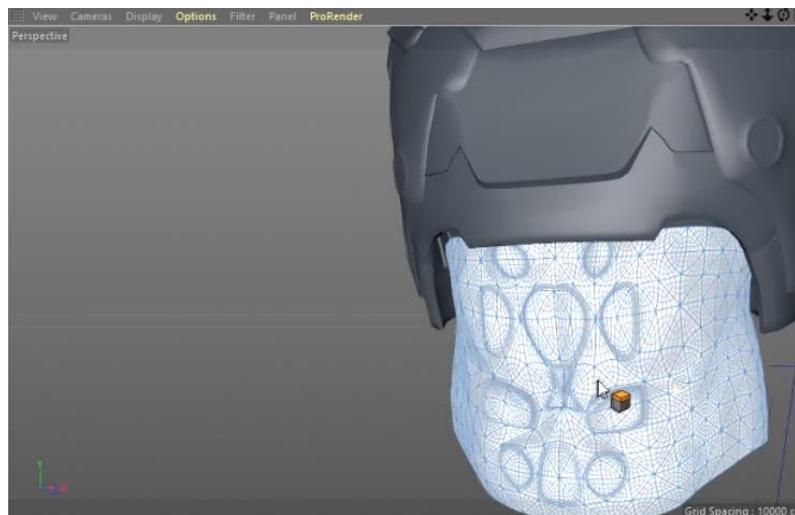
Masuk ke mode extrude



Select faces yang akan di extrude



Tarik cursor untuk extrude faces

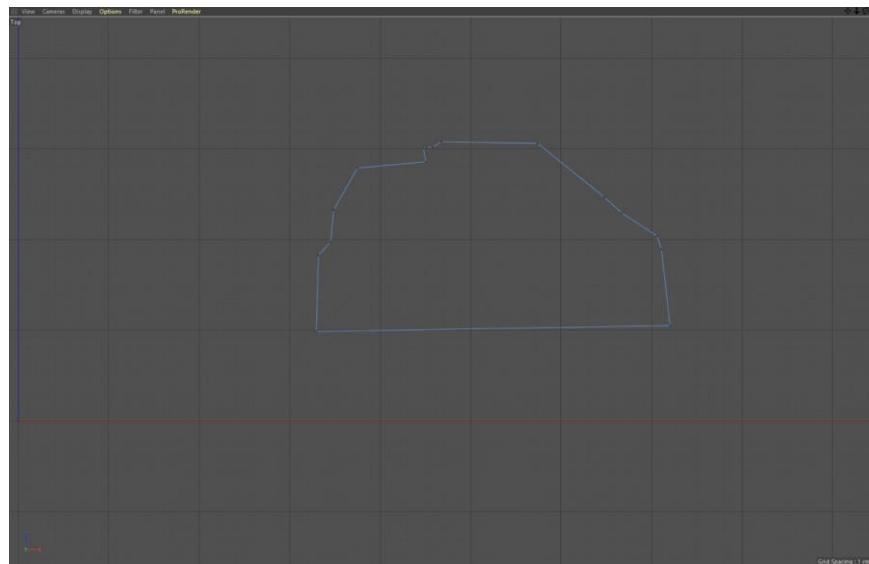


Metode ini dilakukan berulang-ulang hingga mendapatkan bentuk yang diinginkan

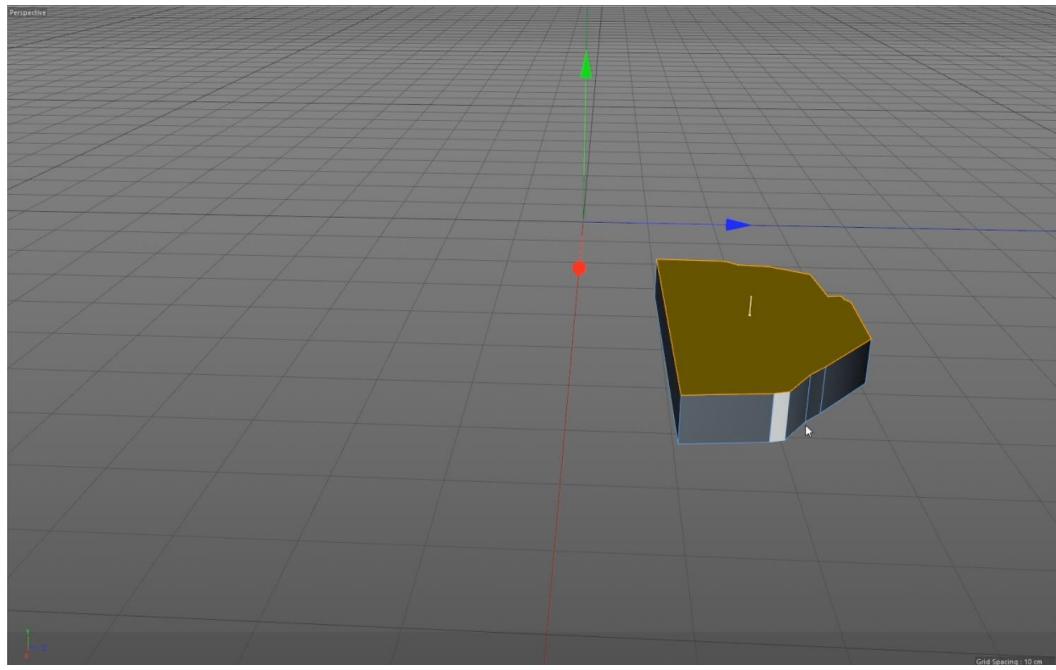
4. Armor Bahu



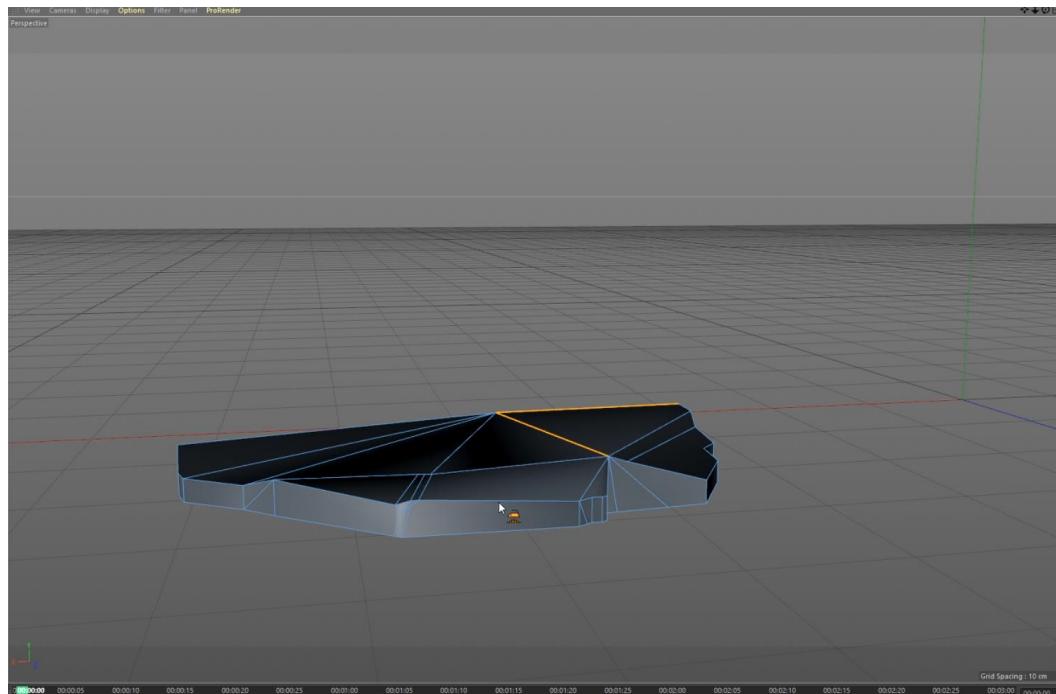
Pembuatan bentuk dasar menggunakan polygon pen



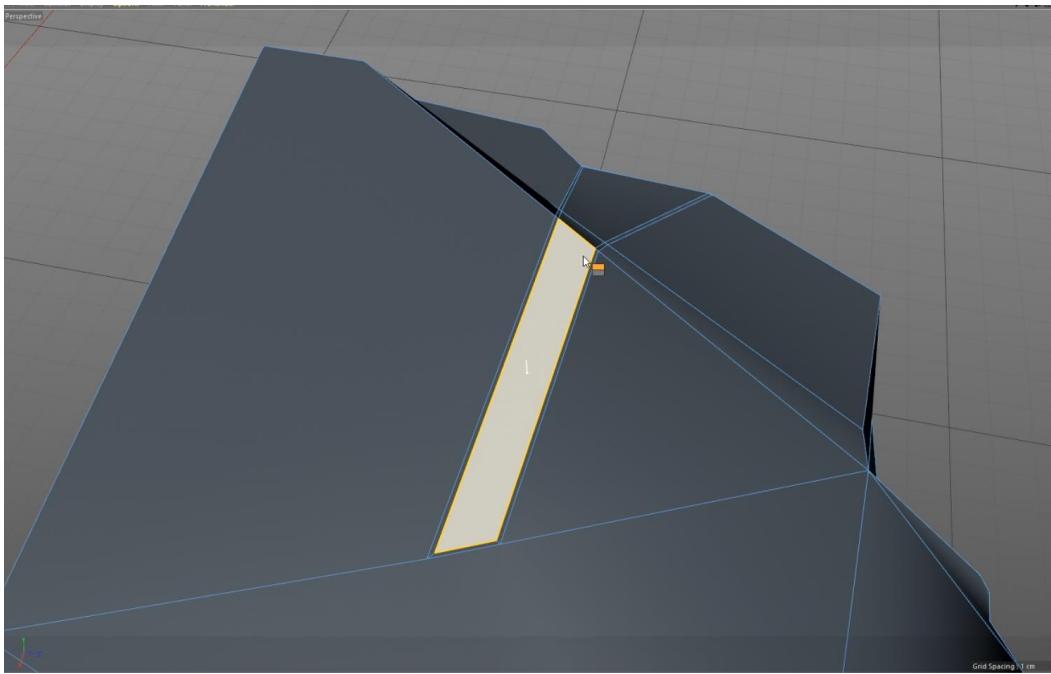
Bentuk dasar sudah terbentuk, buat setengah bagian saja. Nanti akan digabung dengan object simetri



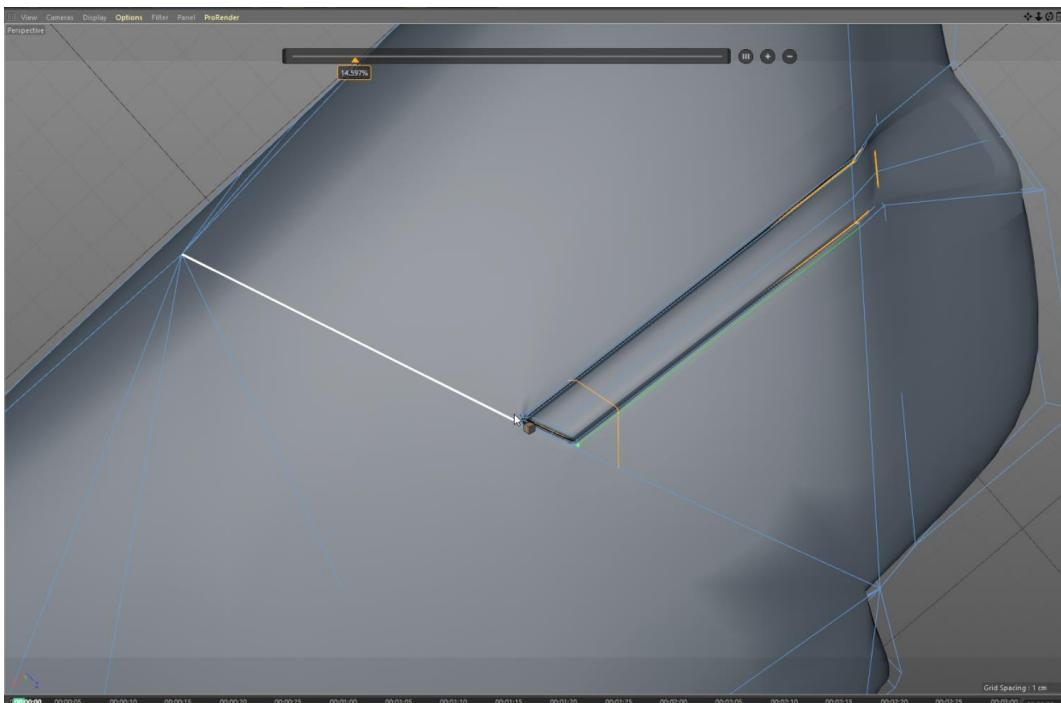
Extrude faces



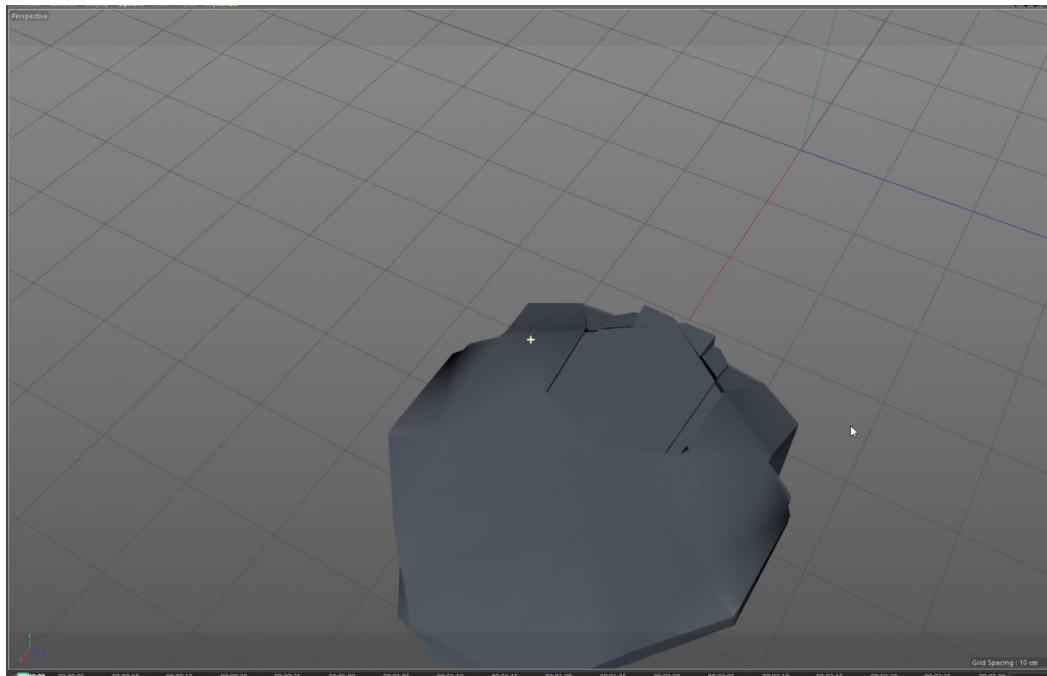
Atur line/edges menggunakan iron tools



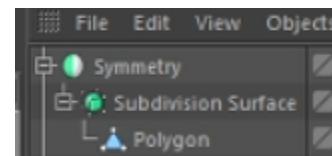
Kombinasikan faces dengan bevel tools untuk membentuk depth



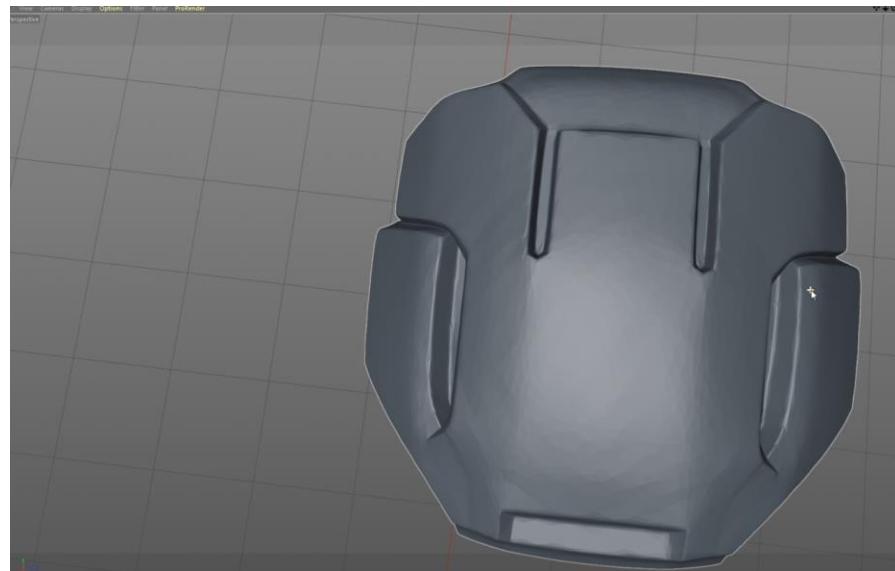
Tambahkan subdivision surface



Tambahkan symmetry object

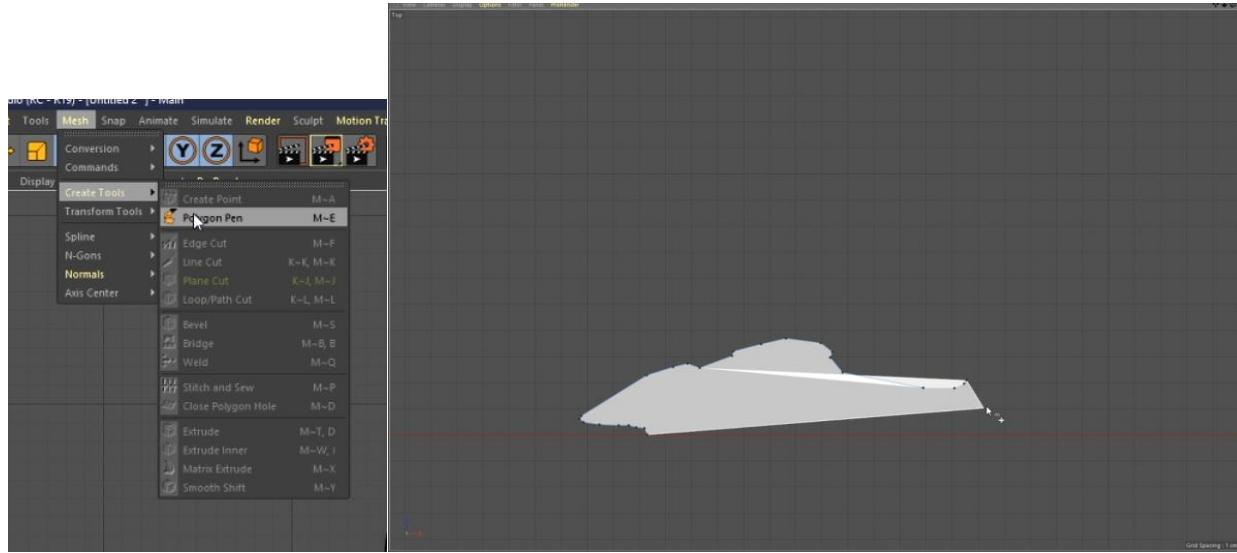


Penempatannya seperti ini

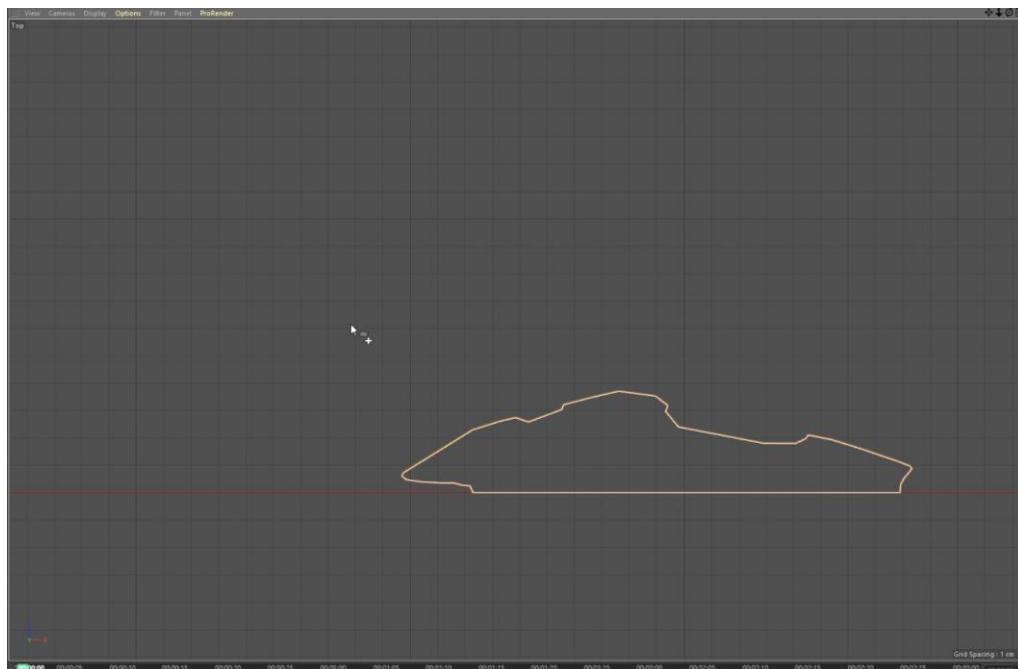


Untuk sisanya menggunakan metode yang sama secara berulang

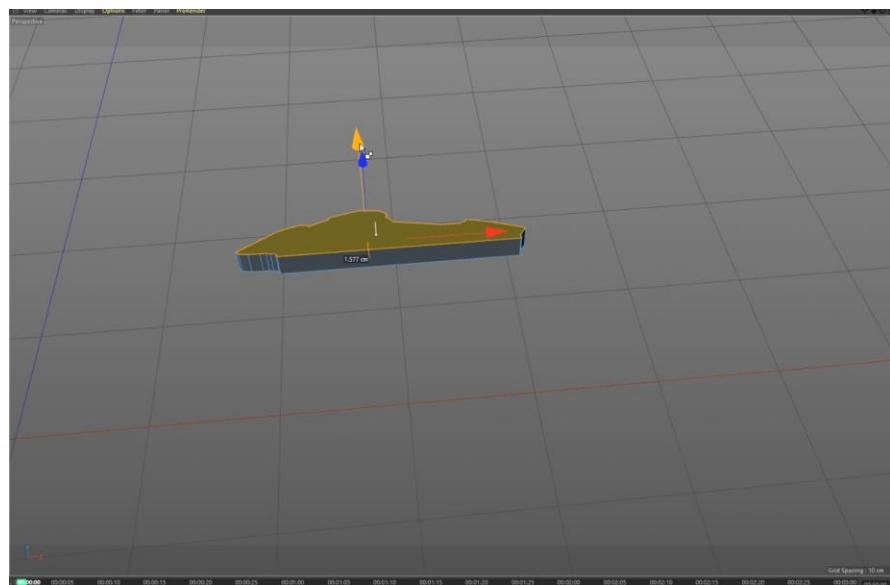
5. Armor Lengan



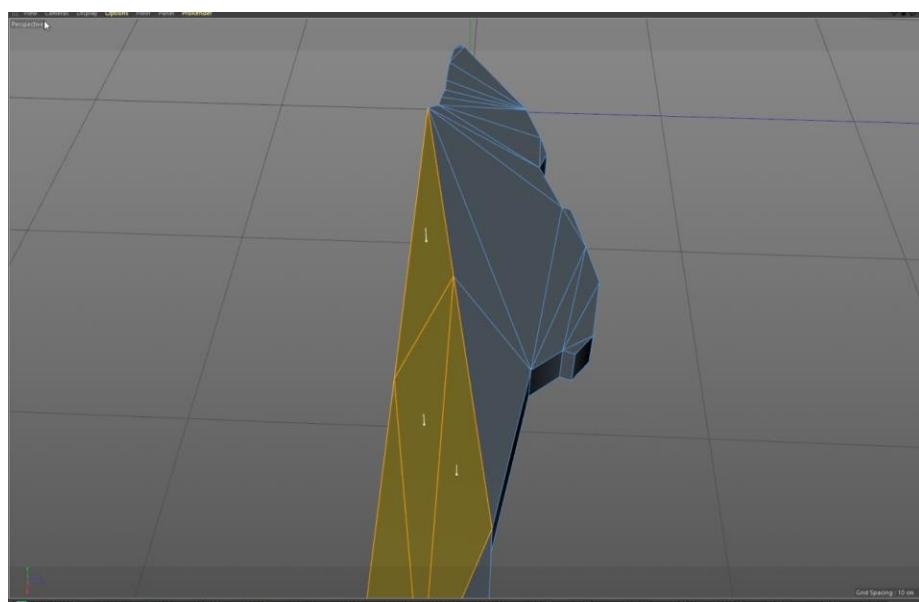
Pembuatan bentuk dasar menggunakan polygon pen



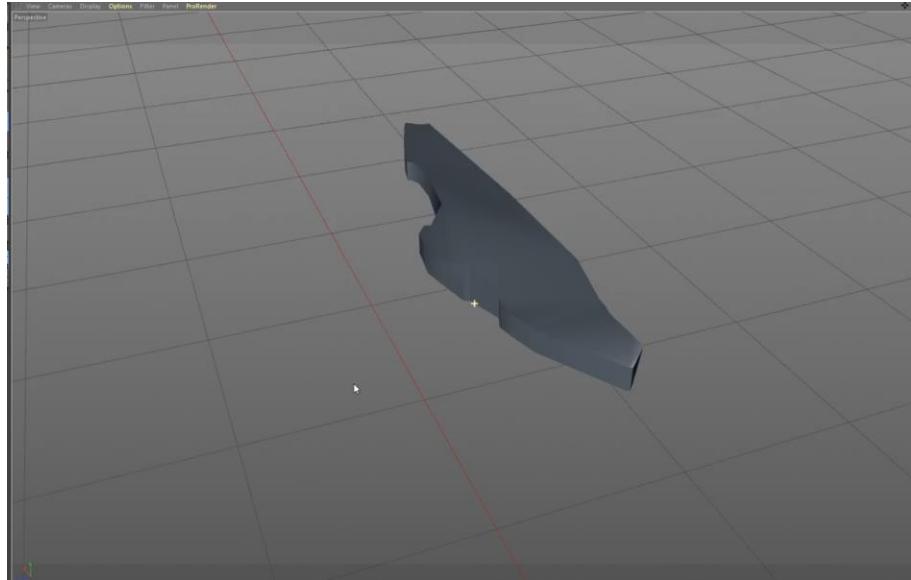
Buat hingga setengah bagian saja



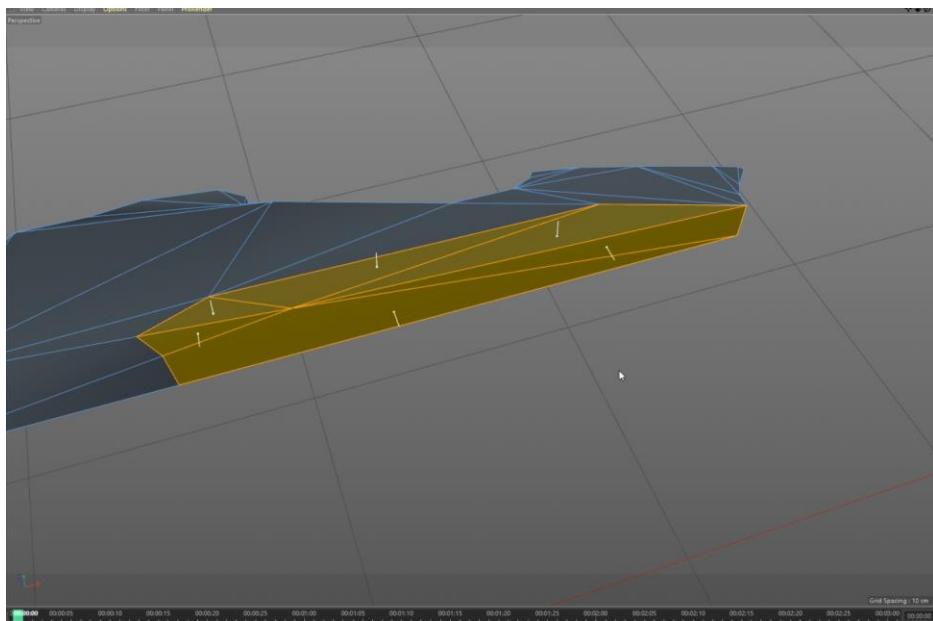
Extrude faces



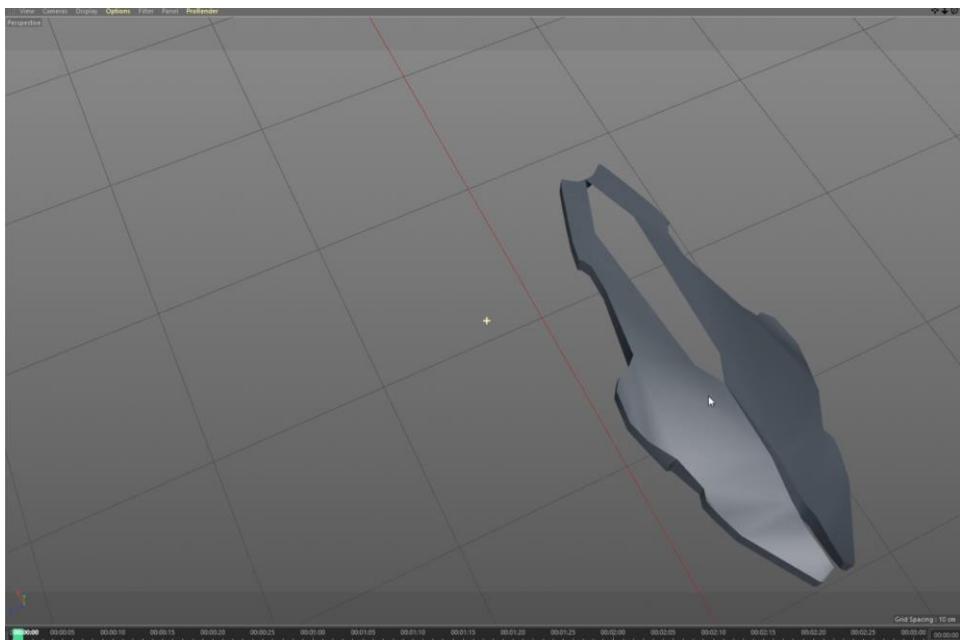
Modifikasi bagian atas menggunakan tools line cut, plane cut, dan iron



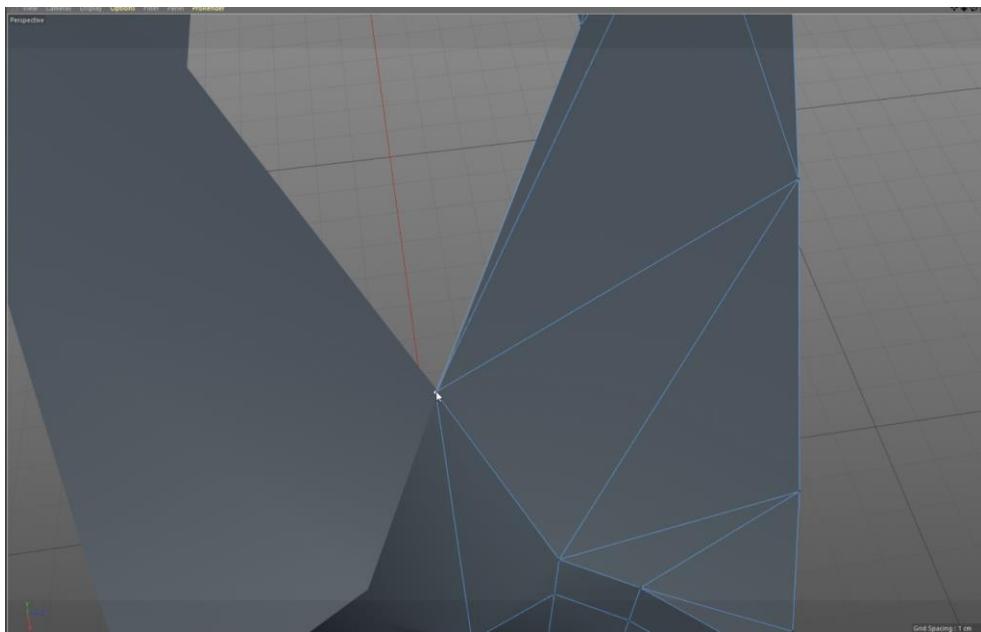
Hingga terlihat tinggi rendahnya



Seleksi bagian pinggir untuk dipotong



Tambahkan object symmetry

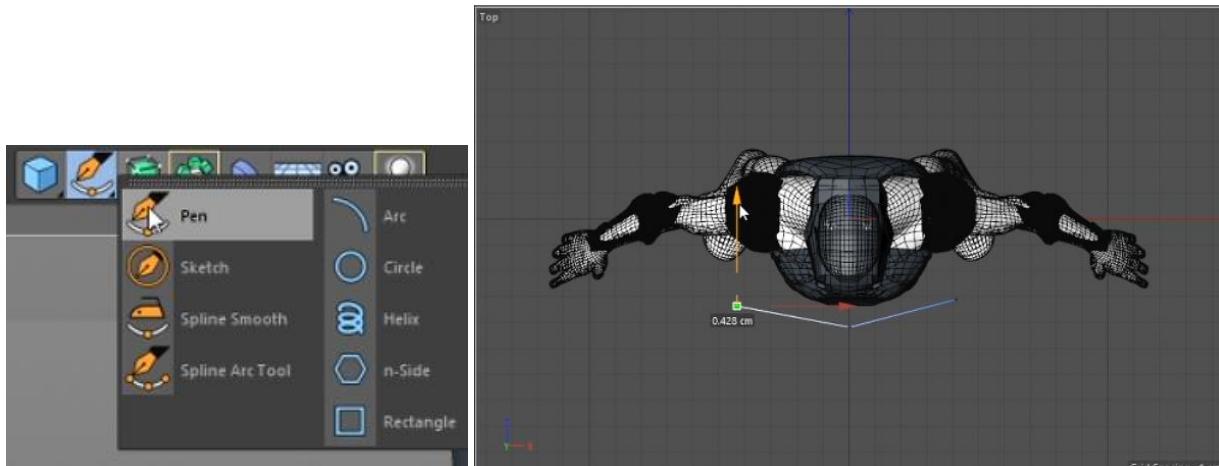


Rapikan point-point

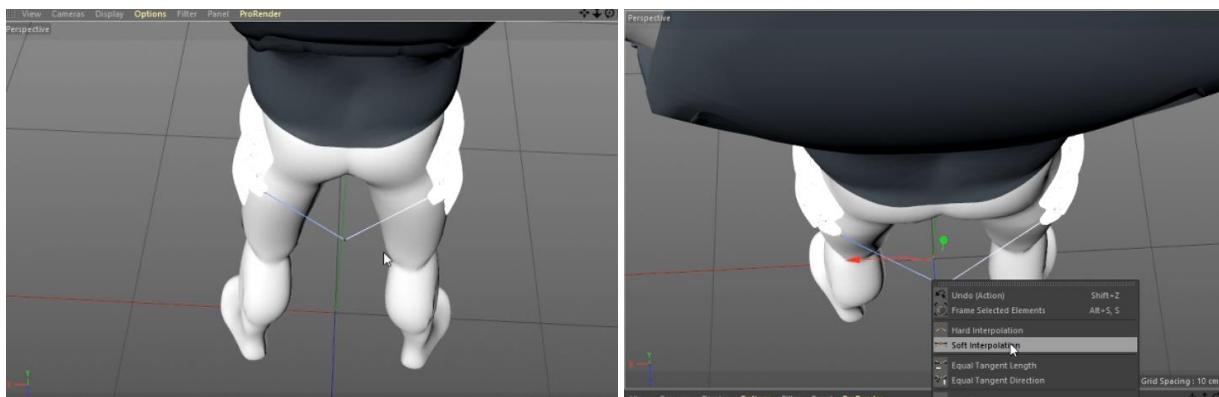


Untuk sisanya menggunakan metode yang sama secara berulang

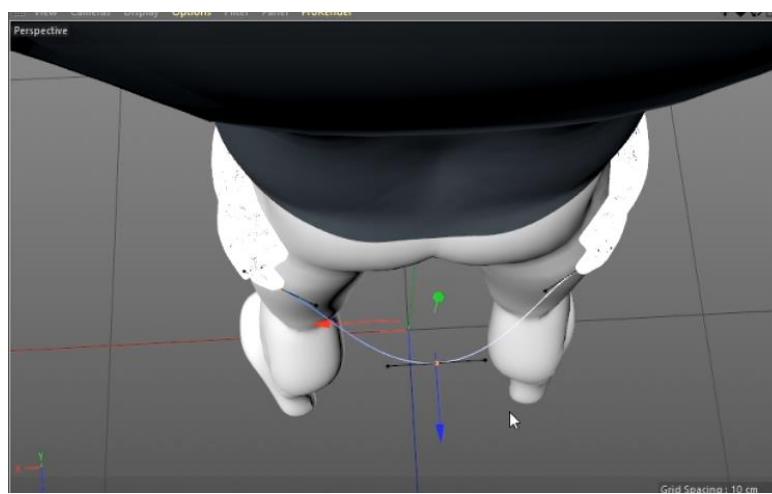
6. Kabel Paha



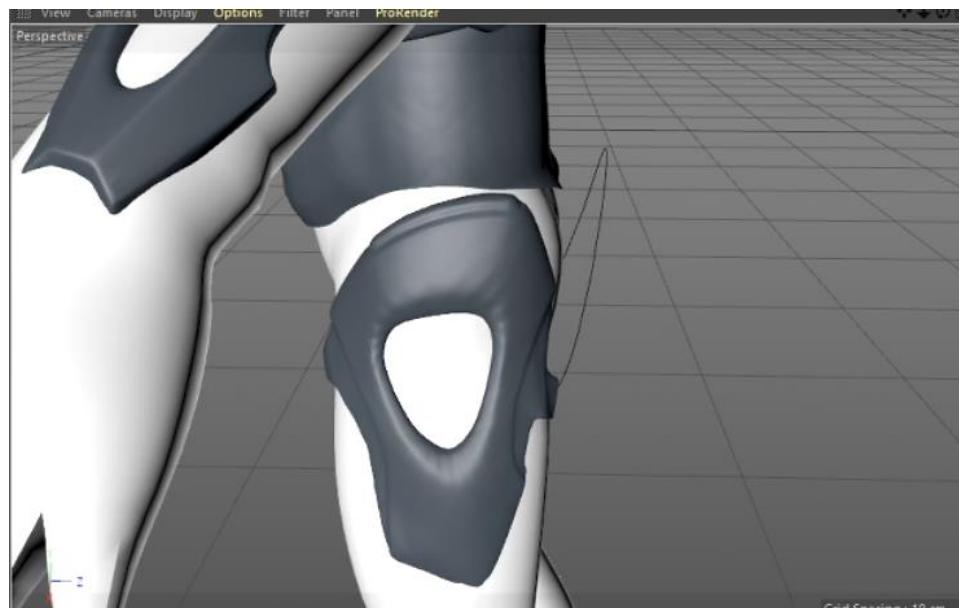
Buat spline dengan pen tools



Atur posisi spline hingga menempel di armor paha, ubah spline dengan soft interpolation



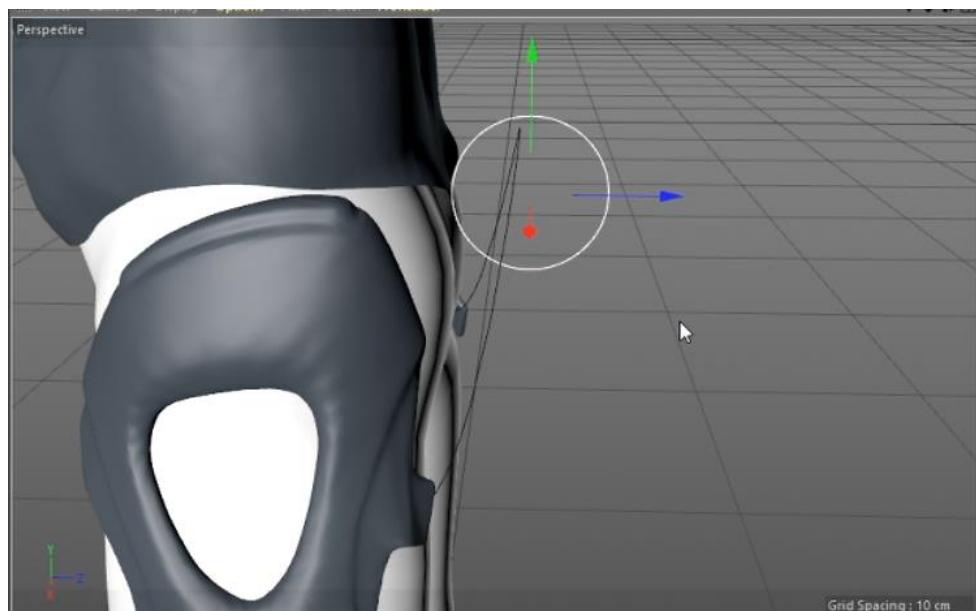
Spline akan melengkung



Posisikan spline menghadap atas



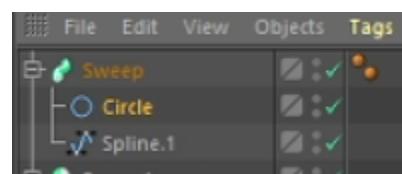
Tambahkan circle object



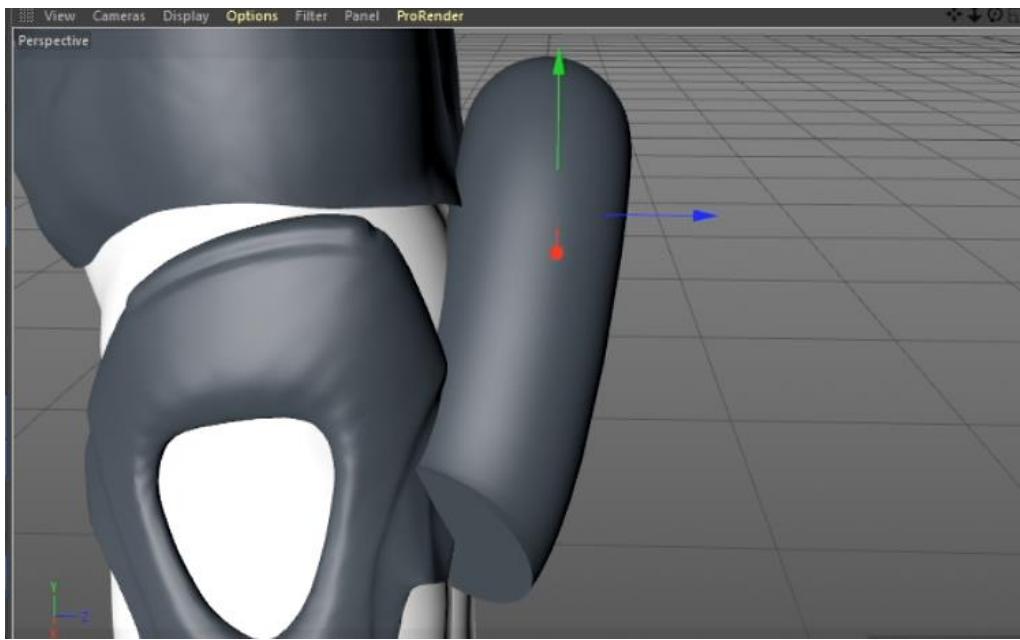
Letakkan dekat dengan spline



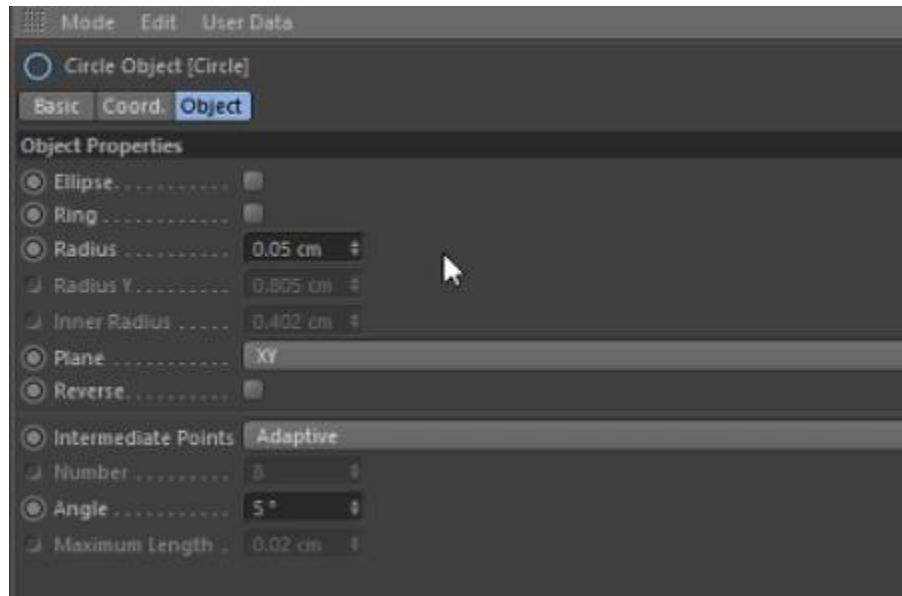
Tambahkan sweep object



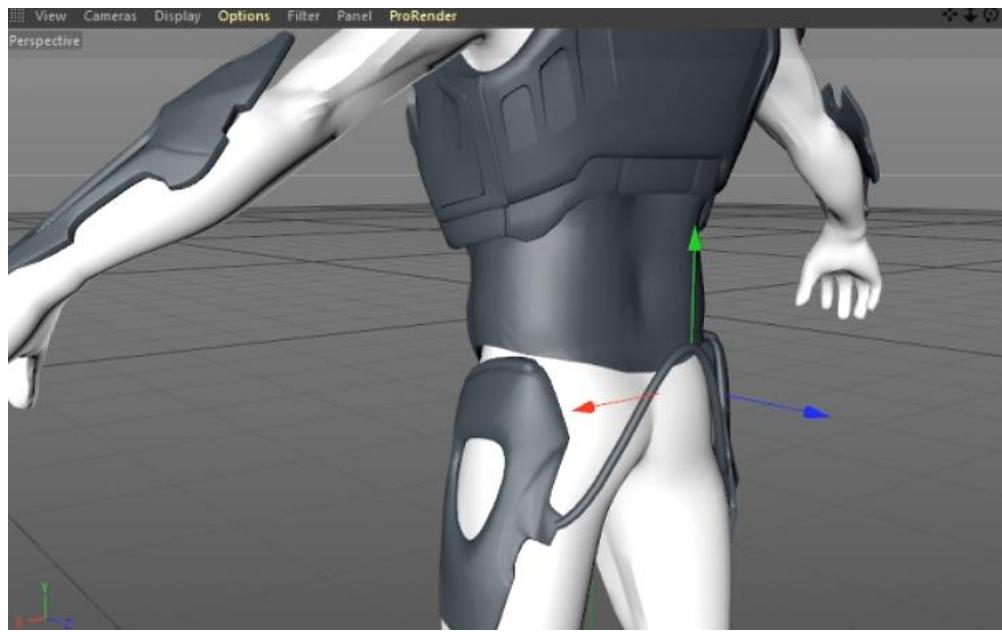
Penempatannya seperti ini



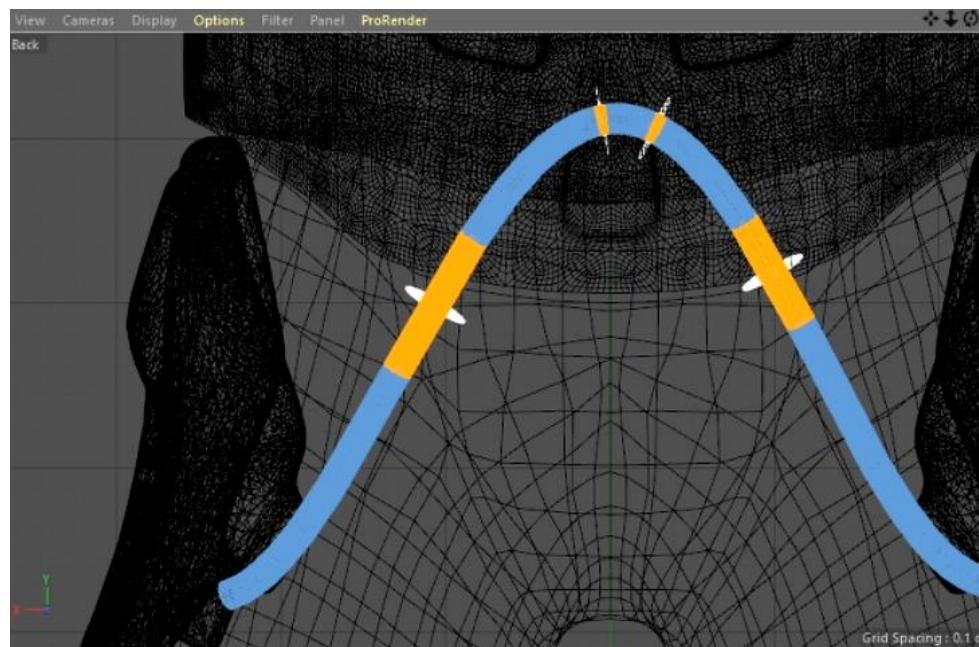
Jika benar maka akan menjadi seperti ini



Atur radius circle untuk memperkecil ukurannya



Jika sudah diperkecil akan terlihat seperti ini



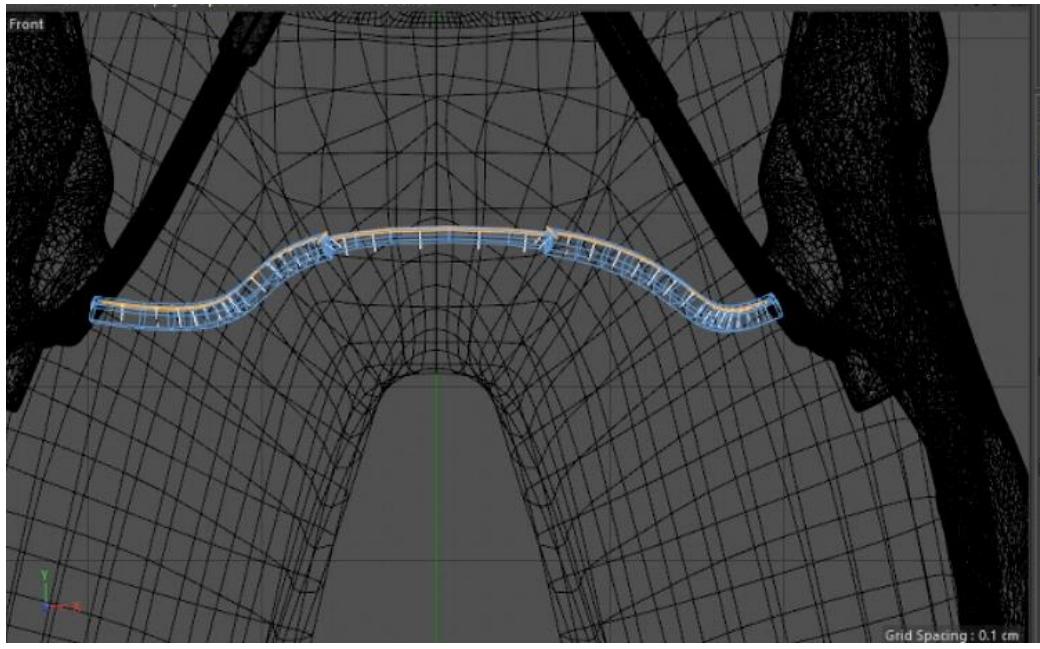
Seleksi menggunakan loop selection



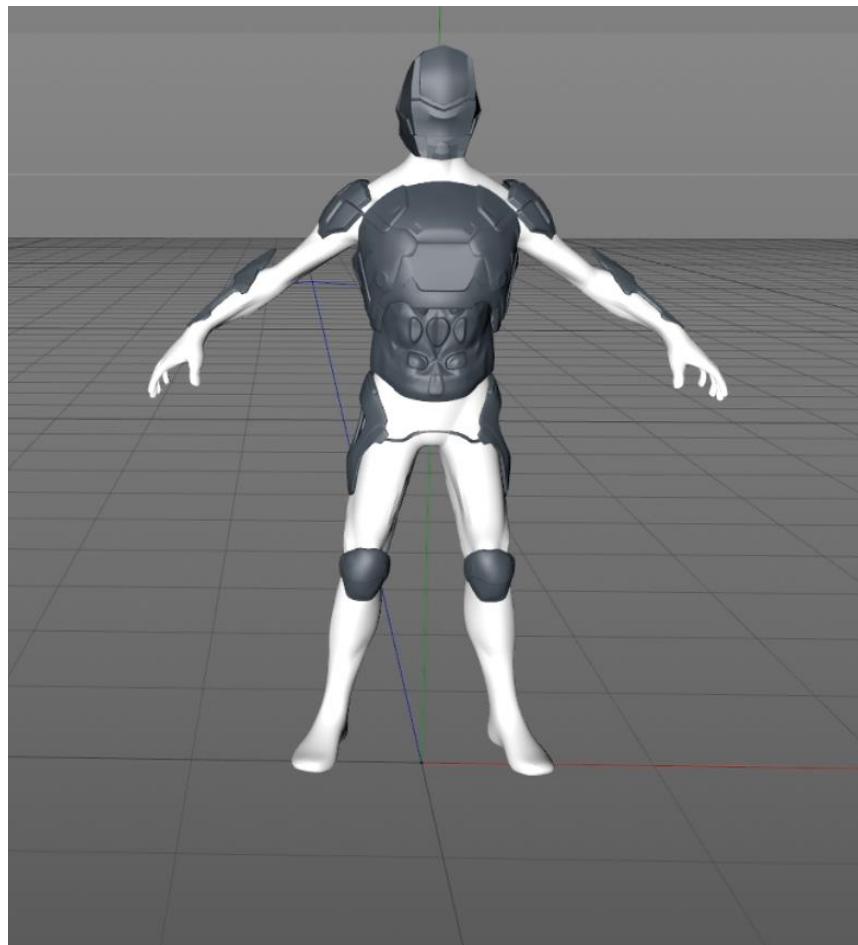
Tambahkan bevel



Dan akan terlihat seperti ini

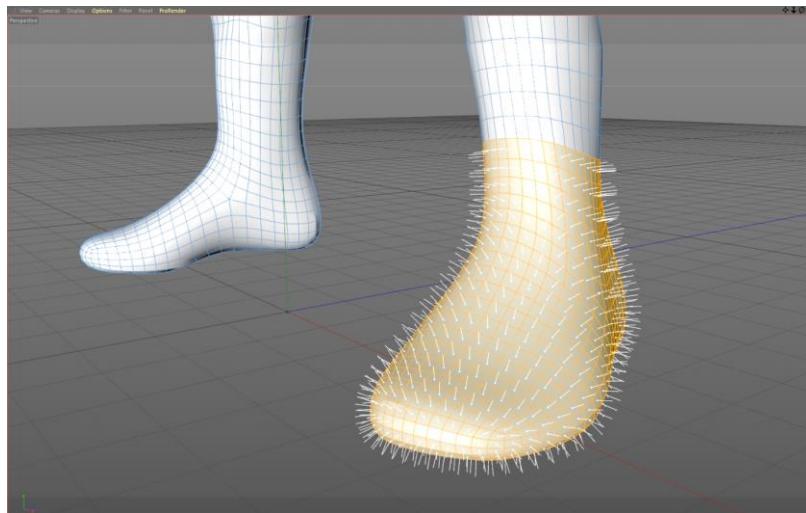


Lakukan metode yang sama untuk menambahkan kabel bagian depan

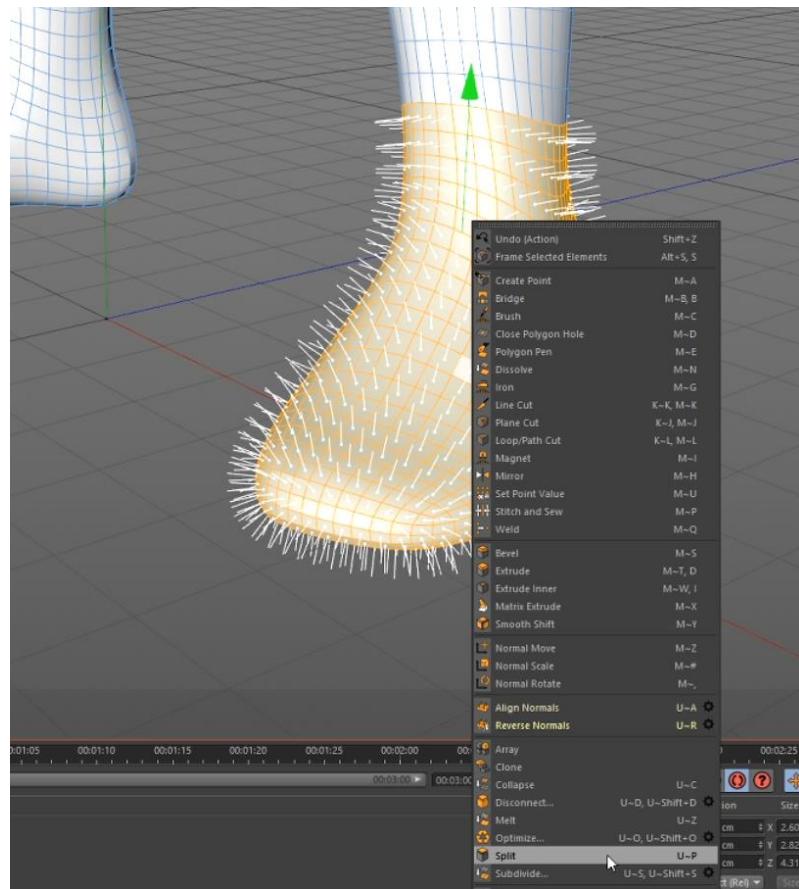


Hasilnya akan seperti ini

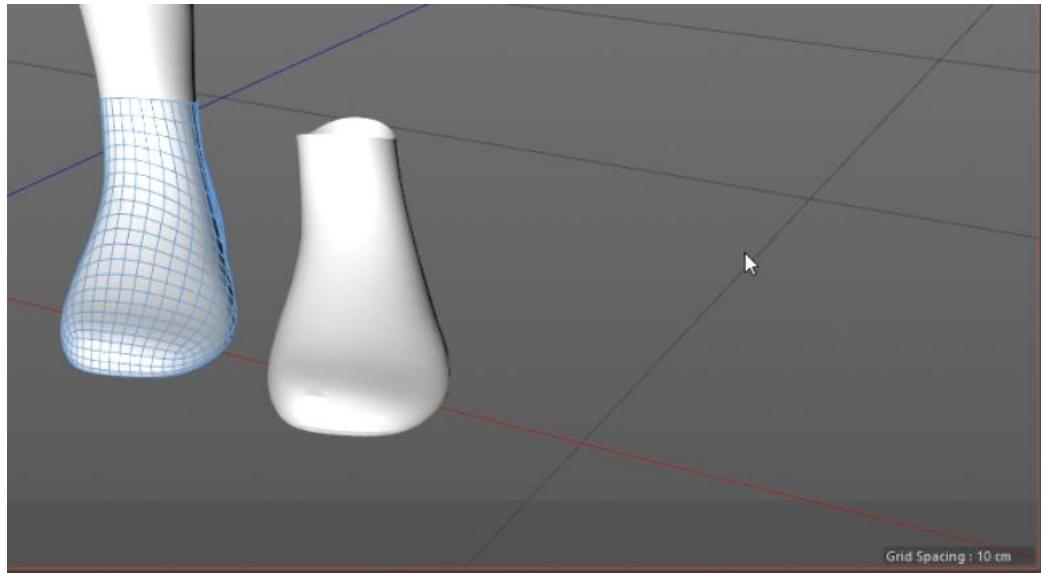
7. Sepatu



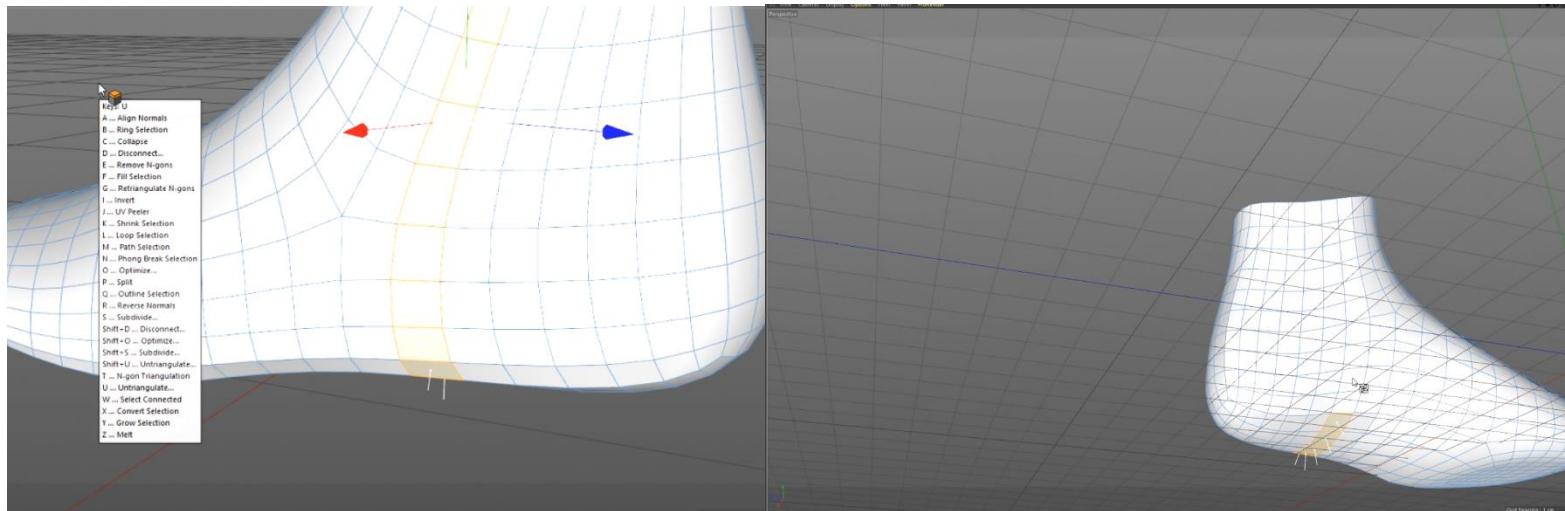
Seleksi bagian alas kaki dari base char



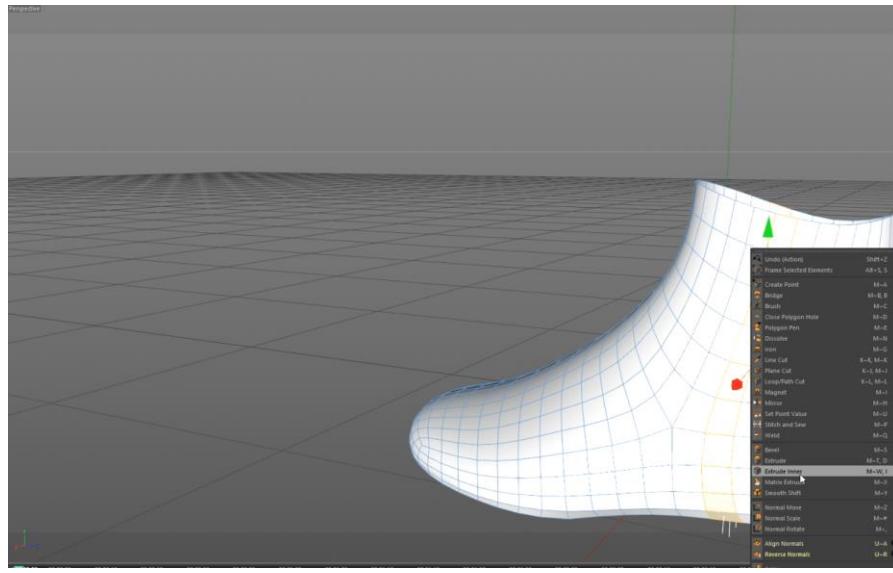
Split bagian yang terseleksi



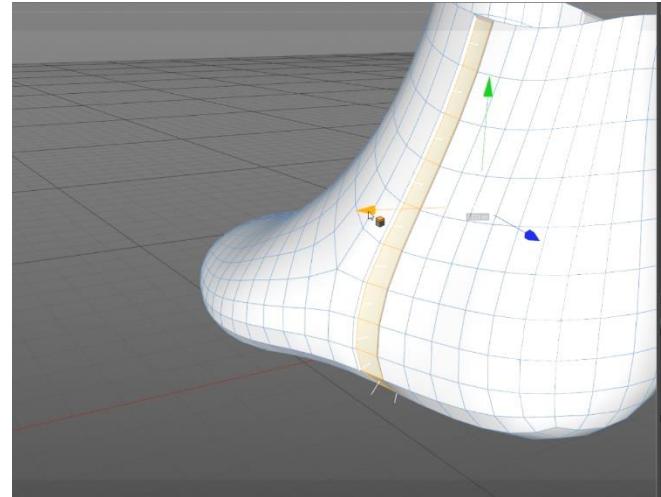
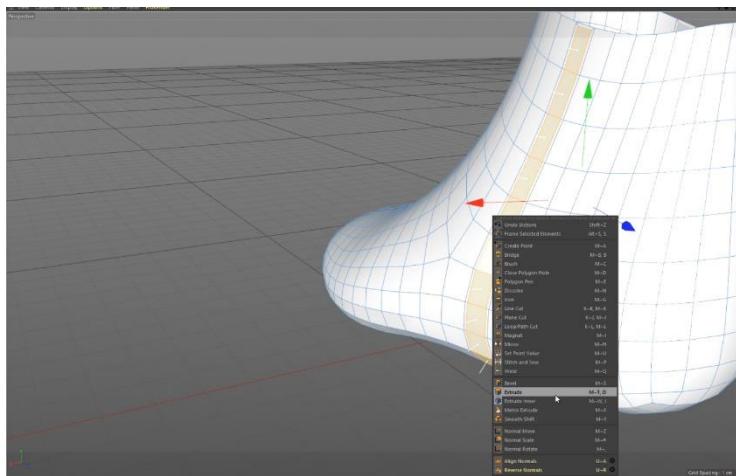
Pisahkan object yang telah di split



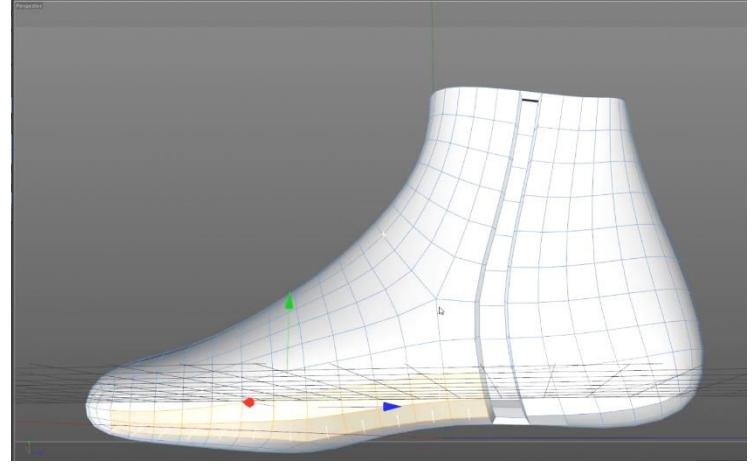
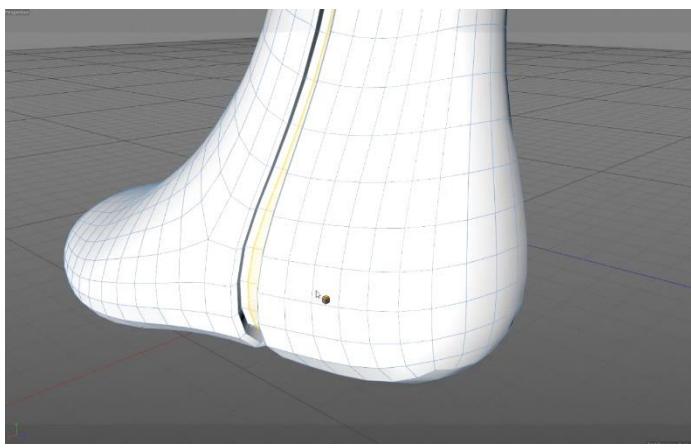
Seleksi sisi bagian dengan loop selection



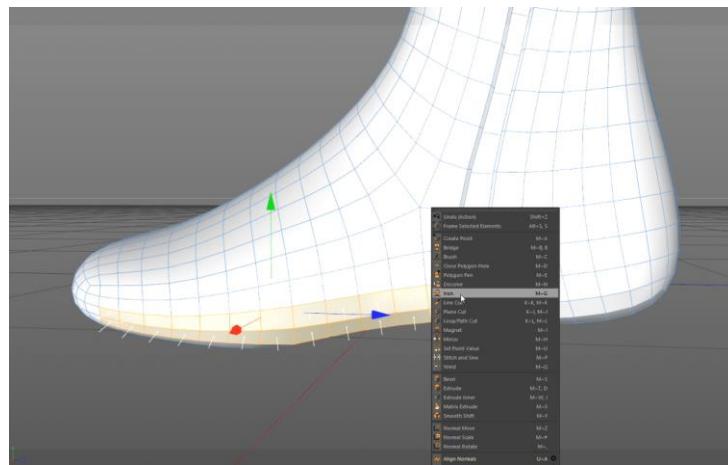
Gunakan extrude inner



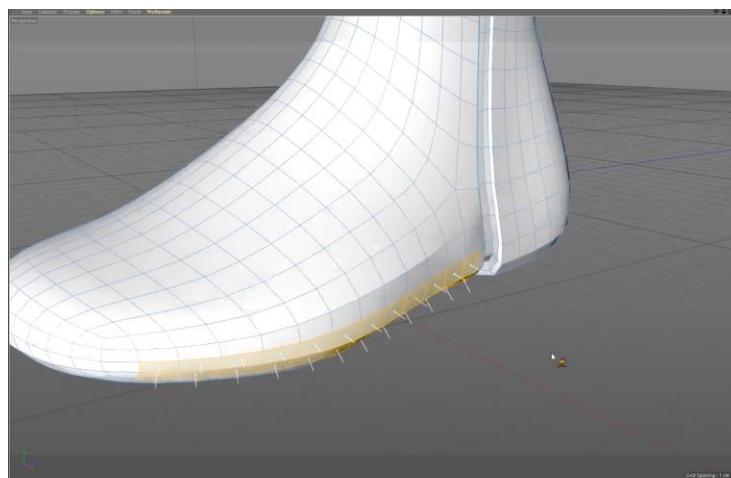
Lalu di extrude dengan mendorong kedalam



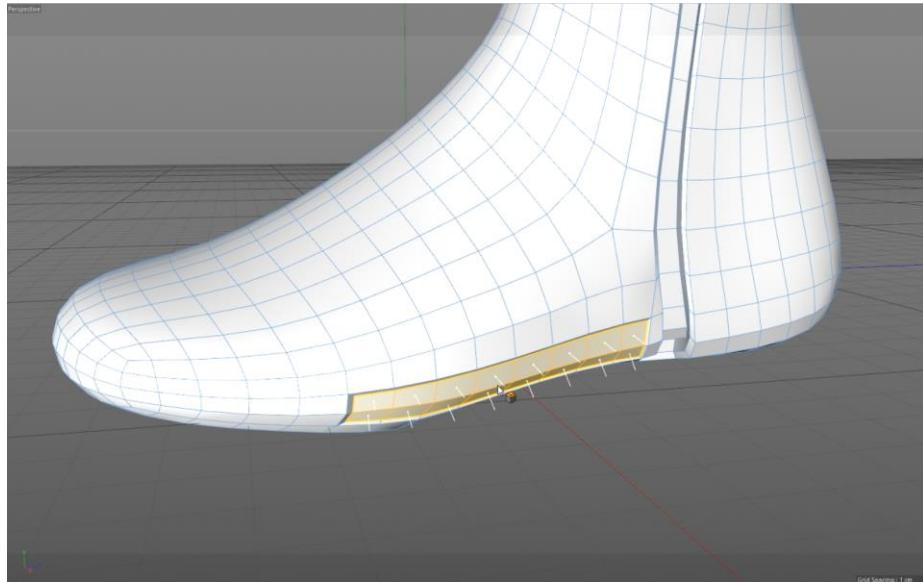
Jika sudah, seleksi bagian samping bawah



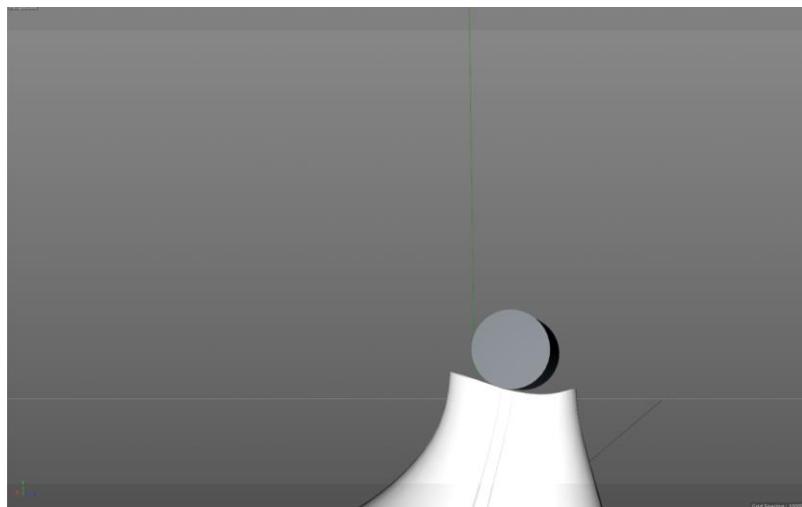
Gunakan mode iron



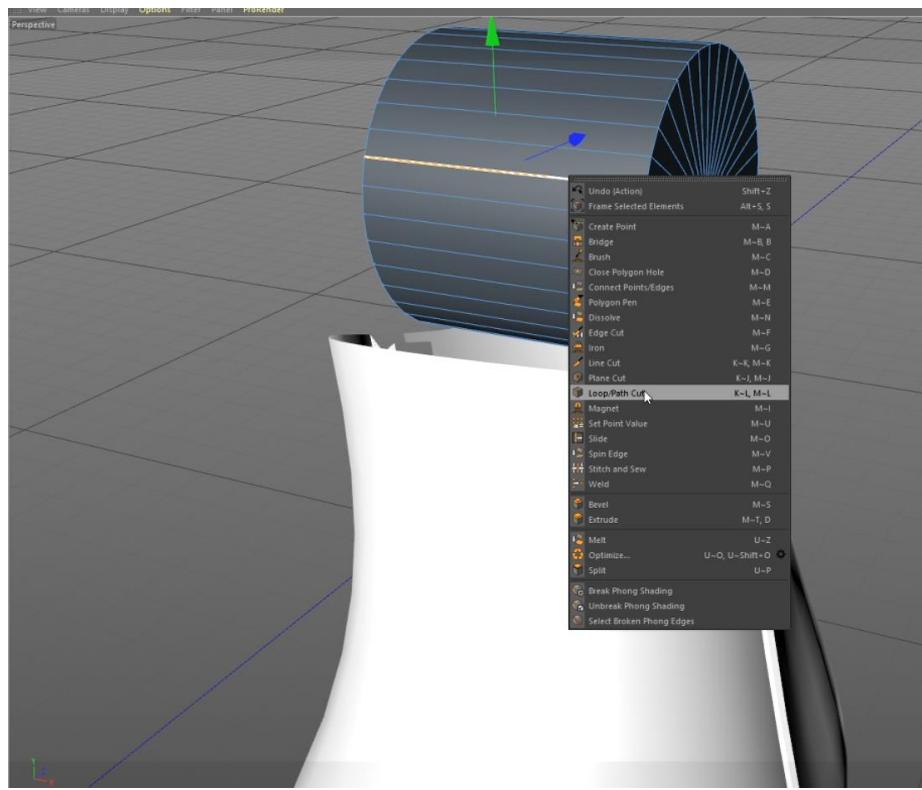
Atur bentuk hingga sedikit miring



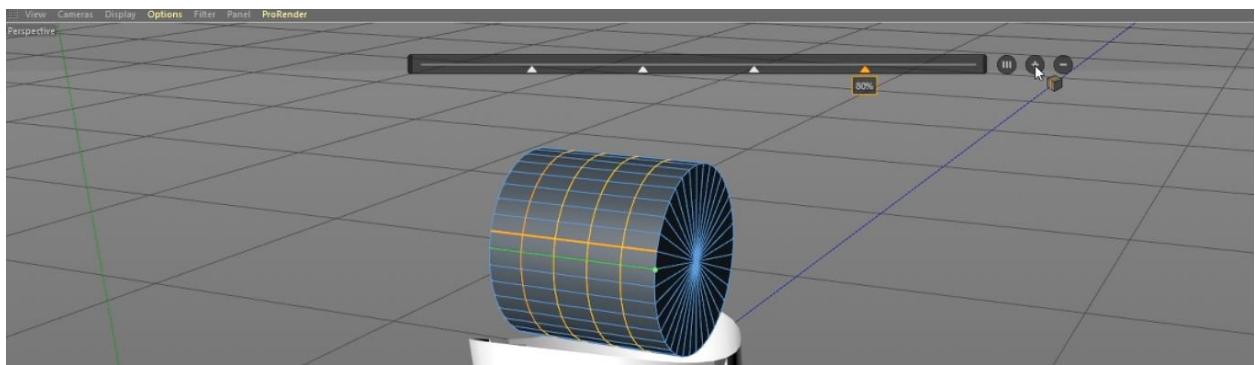
Extrude inner dan bevel bagian tersebut



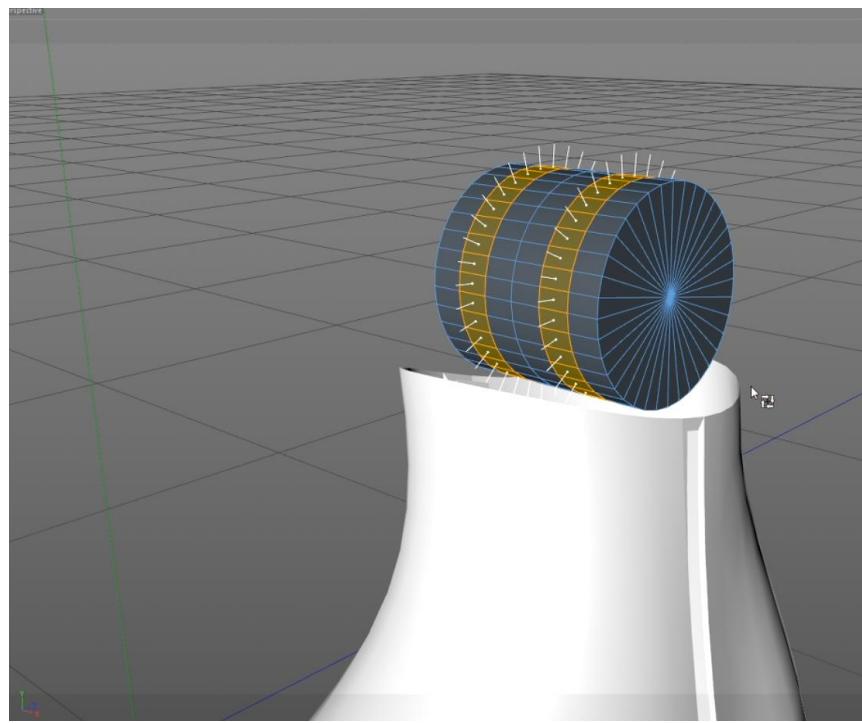
Tambahkan object silinder



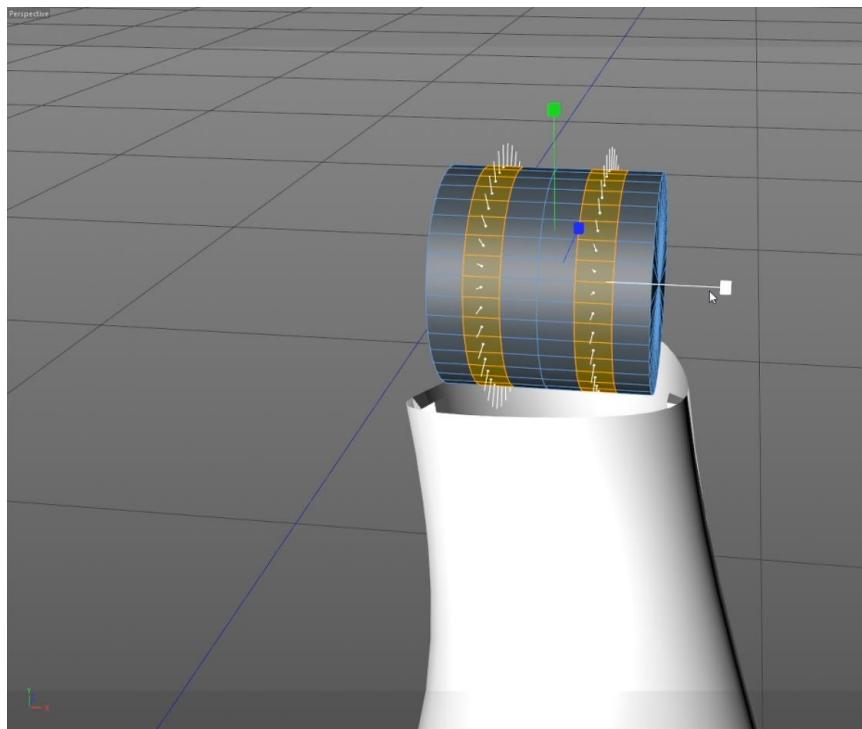
Gunakan loop path cut untuk menambahkan edges



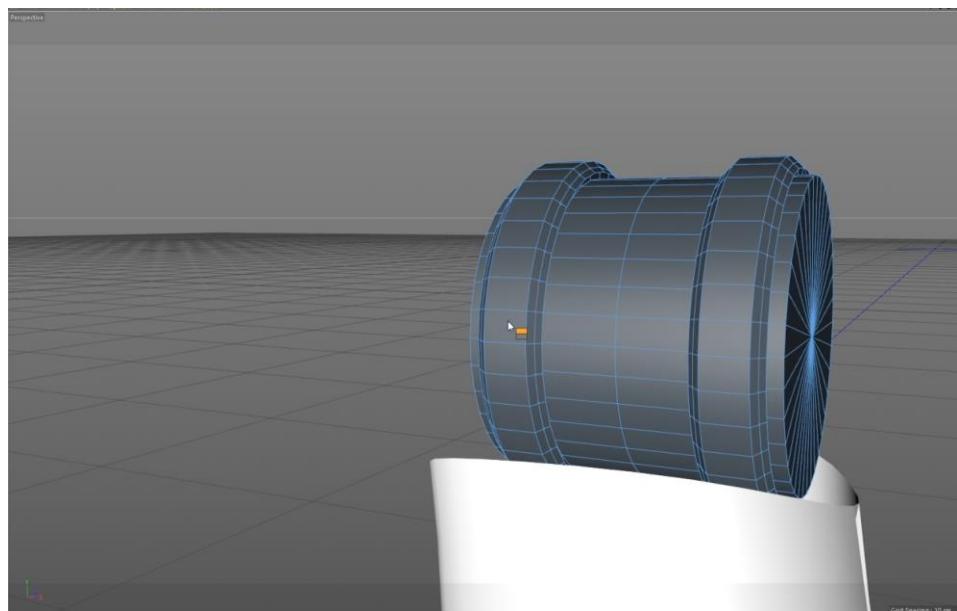
Atur dengan slider agar presisi



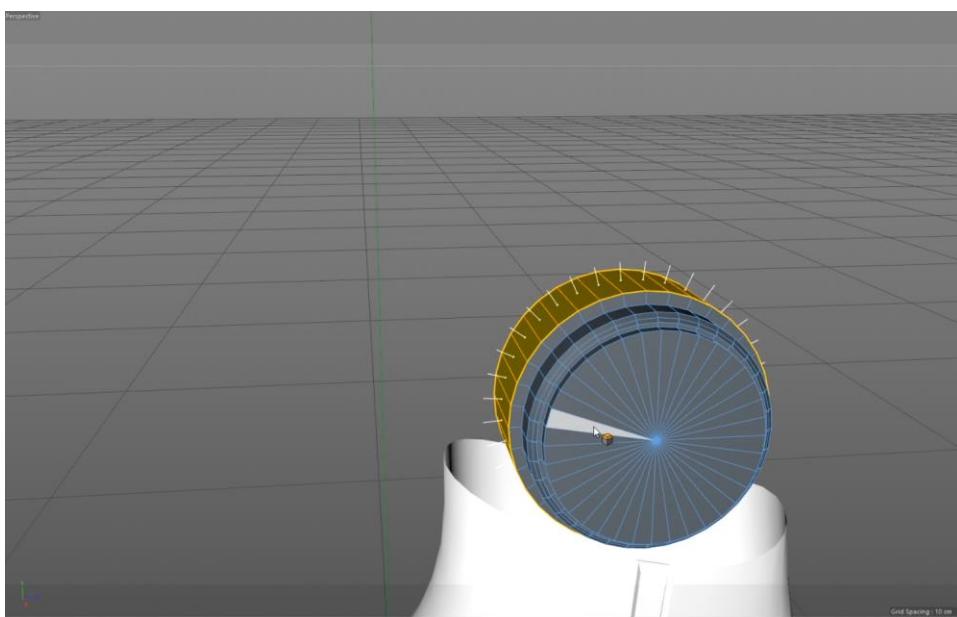
Seleksi menggunakan loop selection



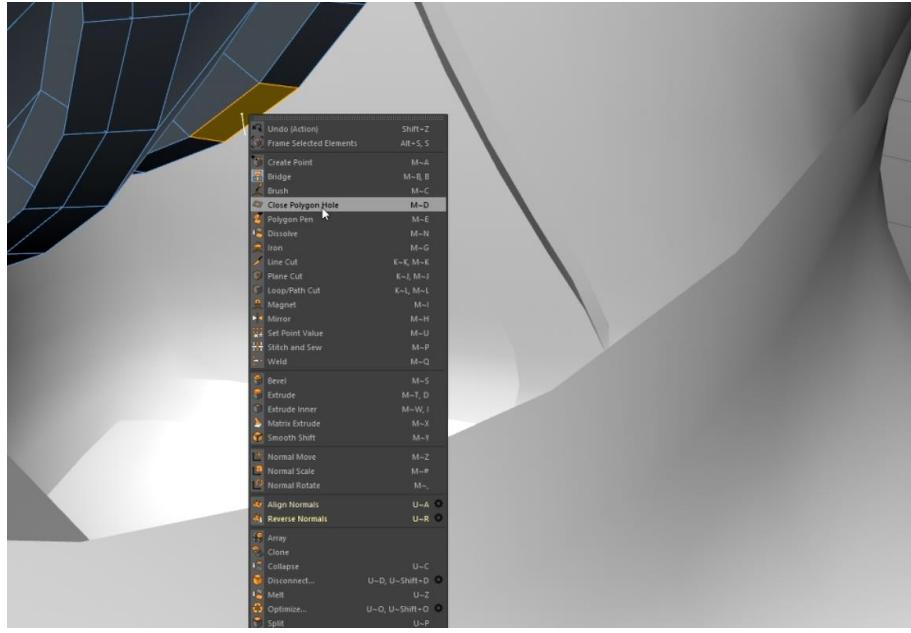
Scale down bagian yang terseleksi



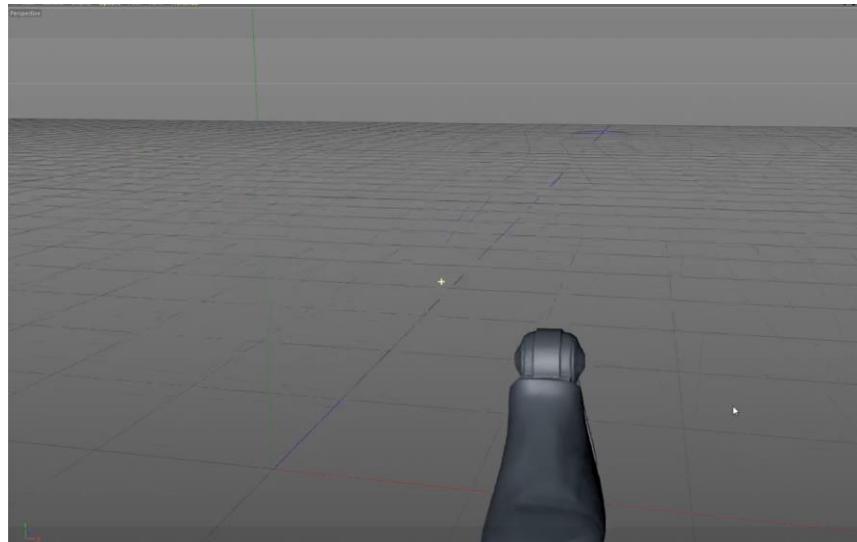
Extrude dan bevel bagian tersebut



Seleksi bagian tengah dari silinder

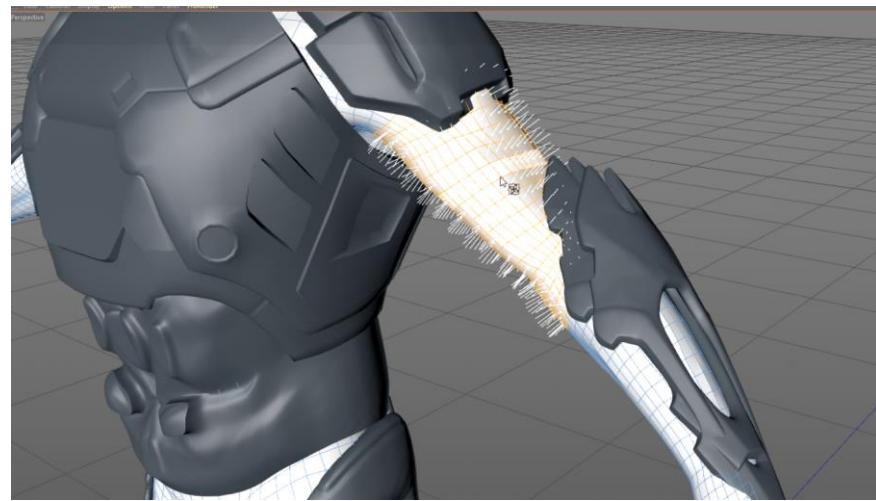


Tutup bagian yang bolong menggunakan close polygon hole

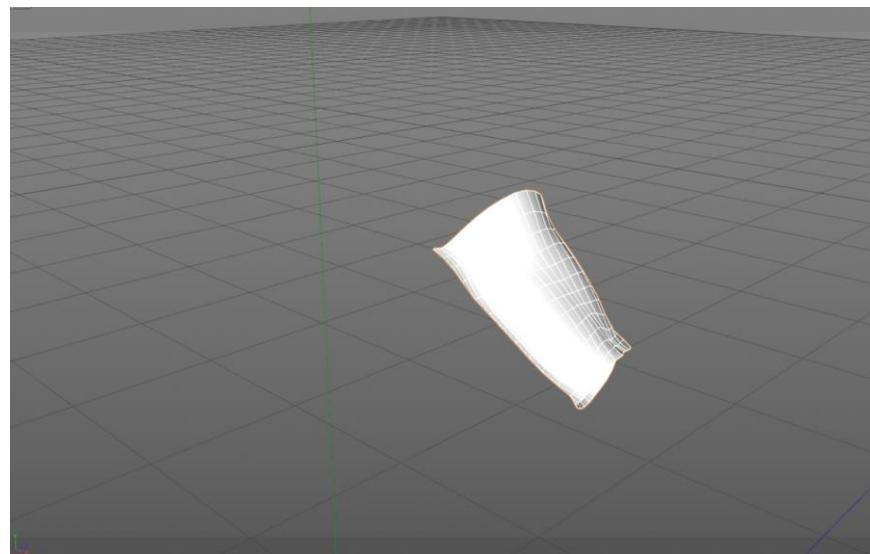


Jika sudah akan seperti ini

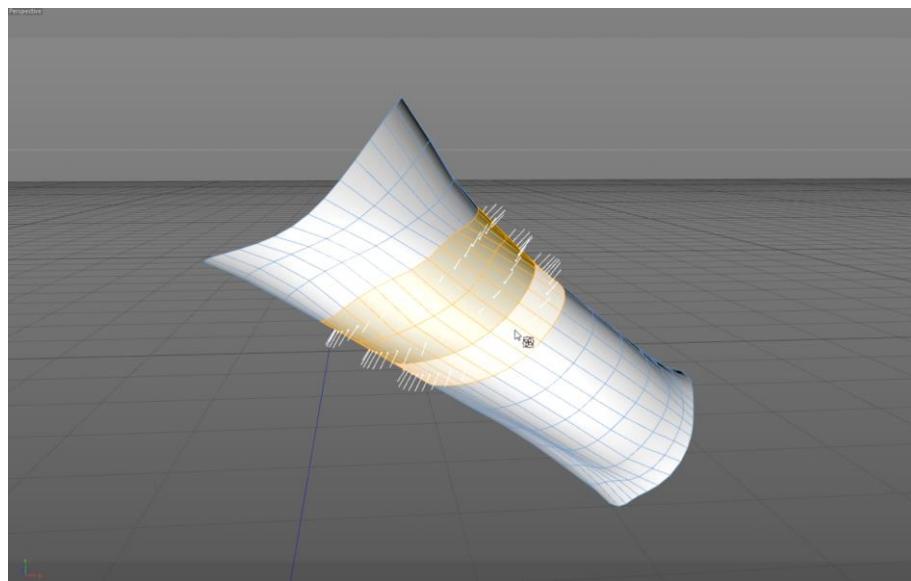
8. Lengan Atas



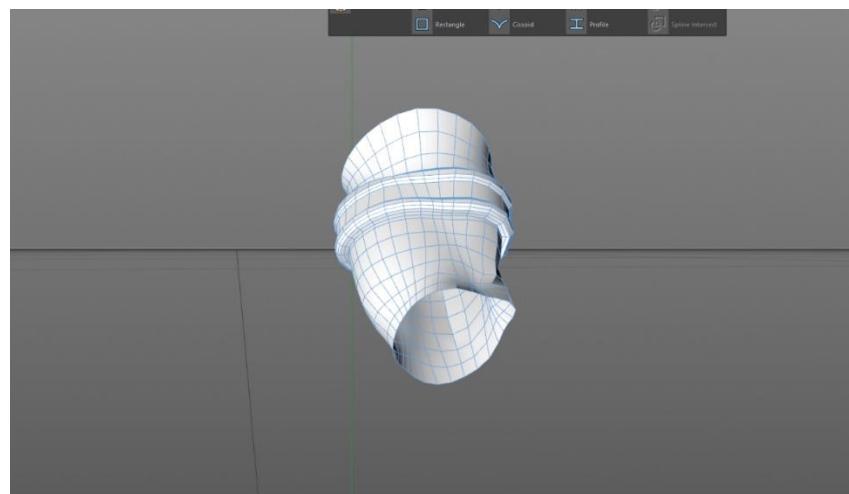
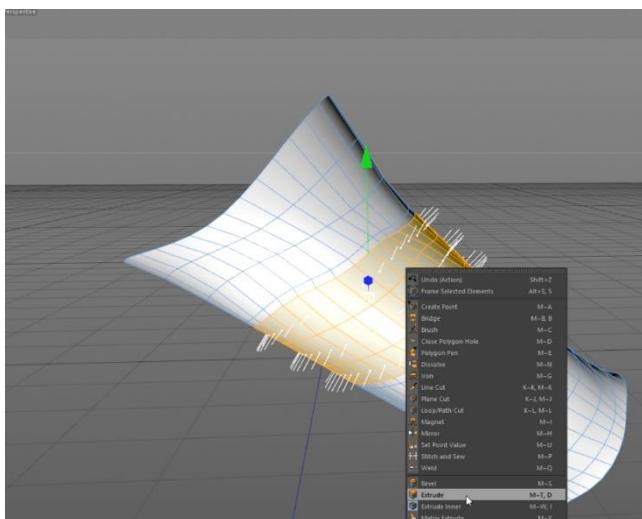
Seleksi lengan atas base char



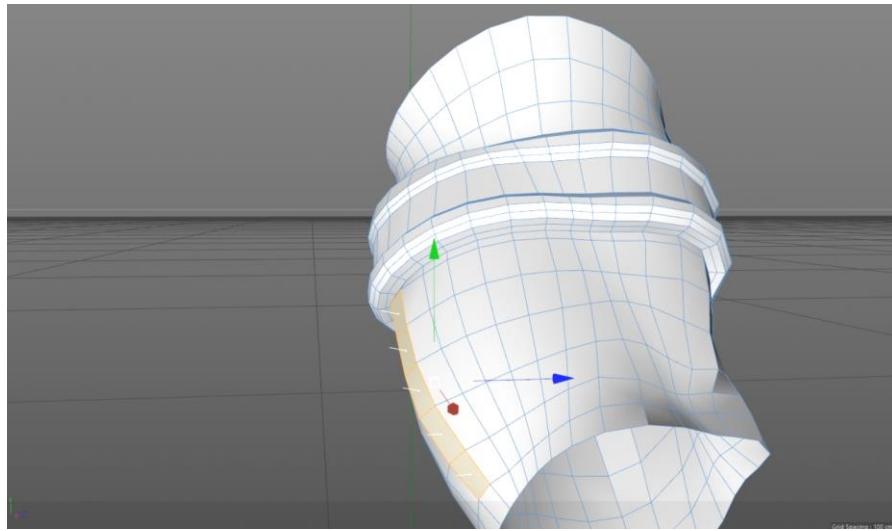
Split lalu hide seluruh object char



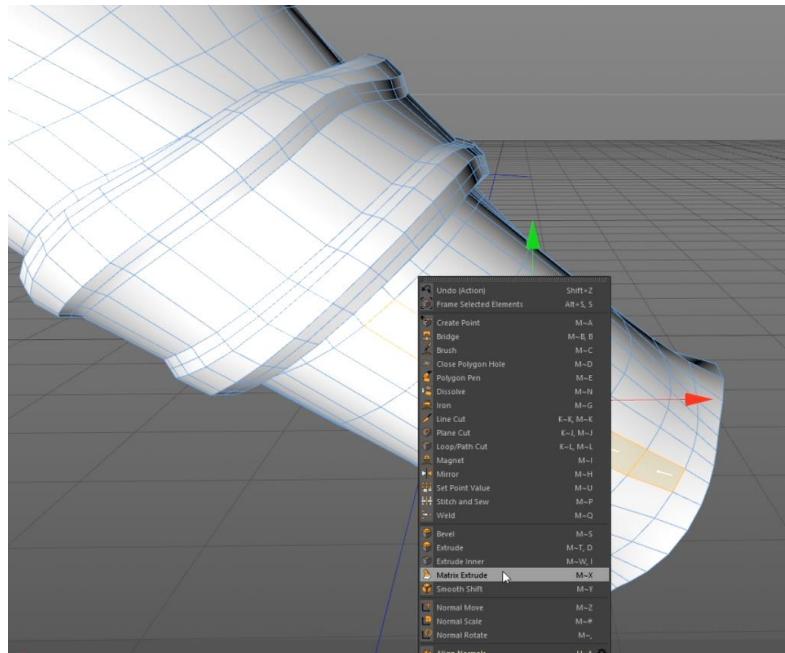
Seleksi menggunakan loop selection di bagian tengah



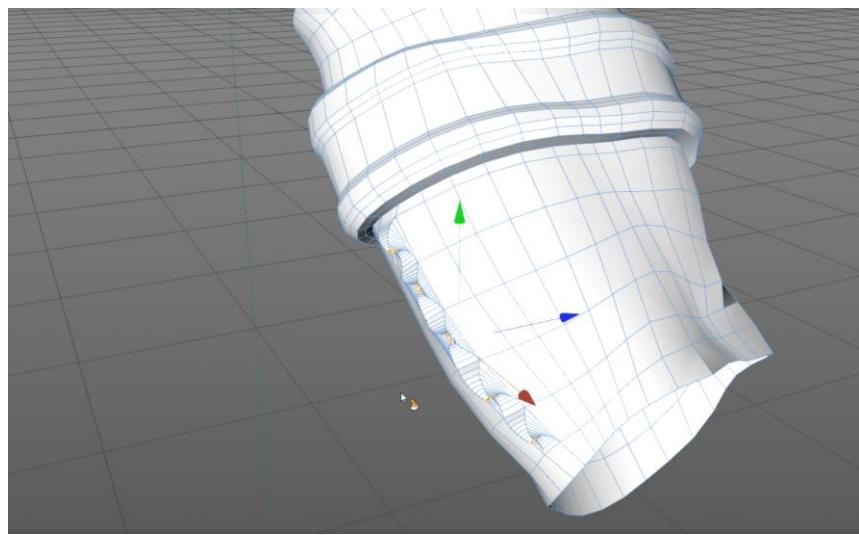
Extrude bagian yang terseleksi



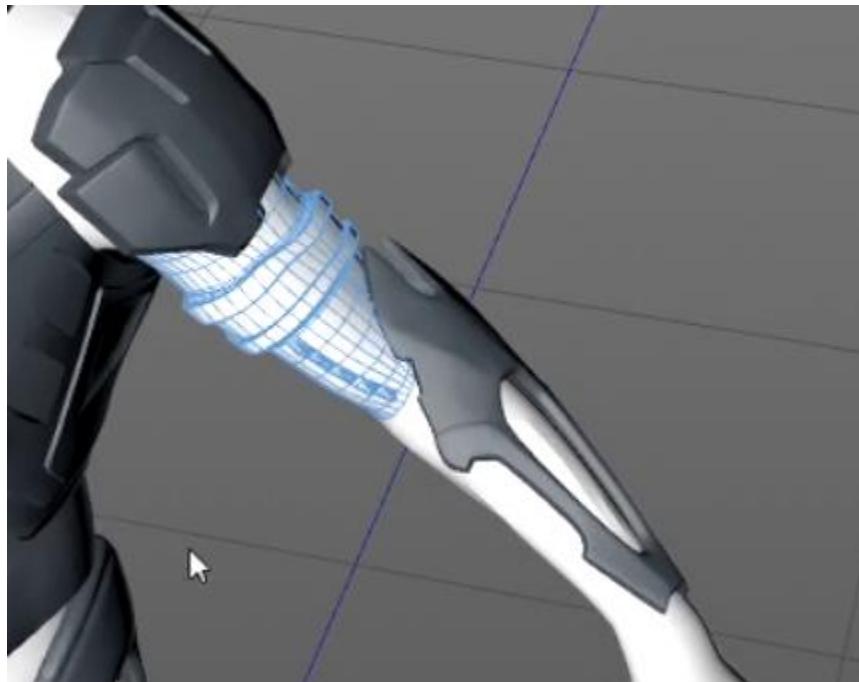
Lanjut seleksi 1 line



Gunakan matrix extrude untuk membuat part seperti duri

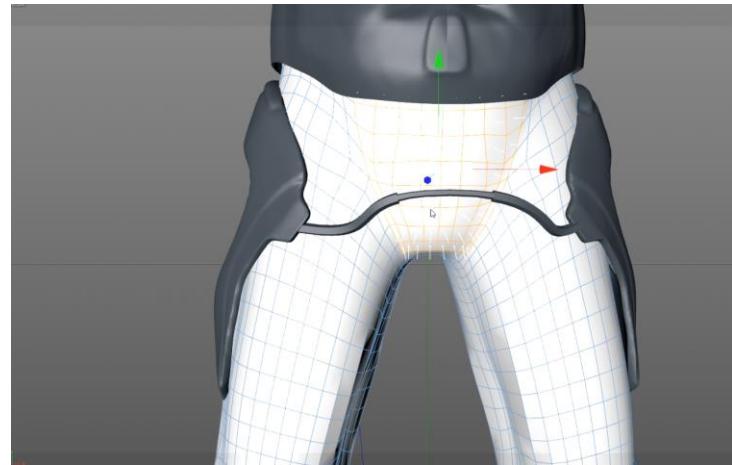


Hasilnya akan seperti ini

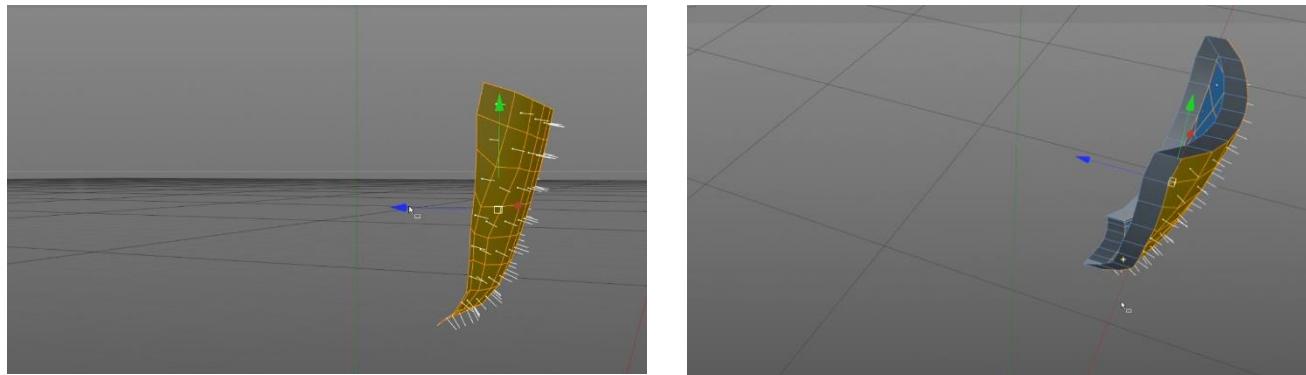


Kemudian unhide seluruh object

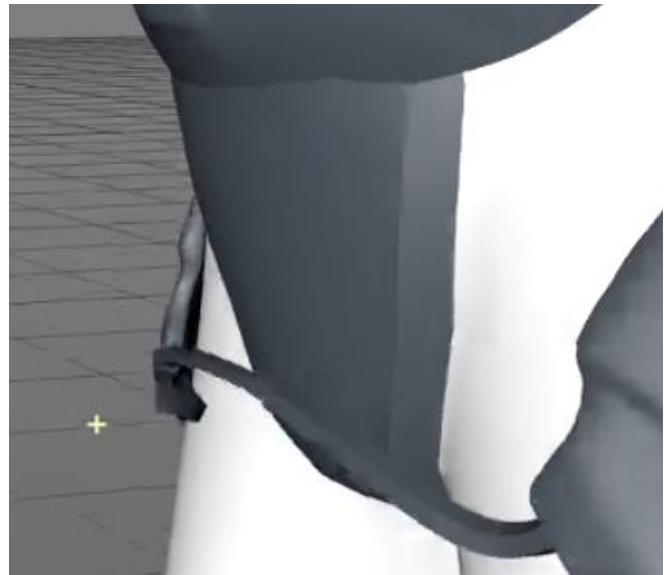
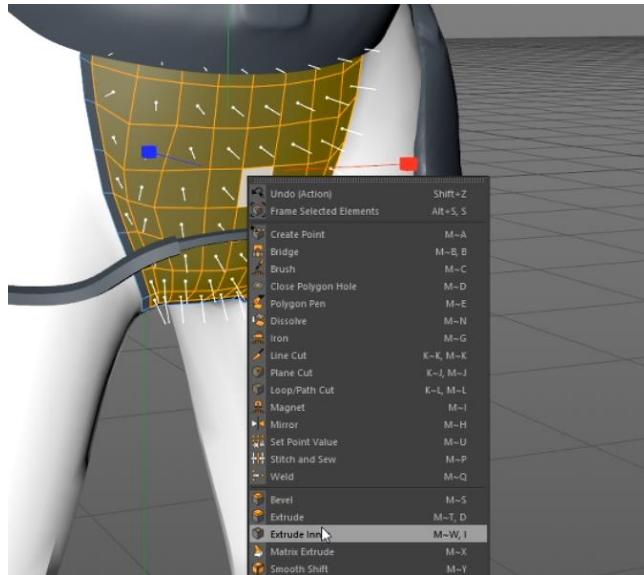
9. Bawahan & Pantat



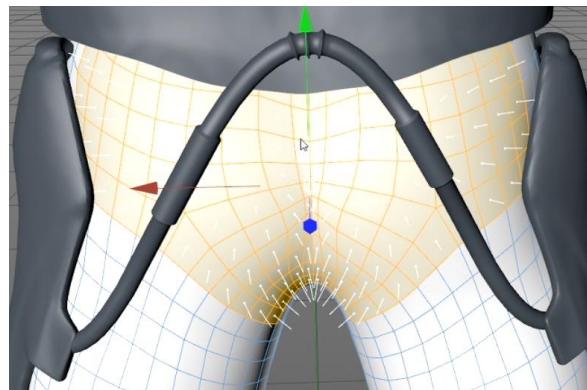
Seleksi bagian bawah



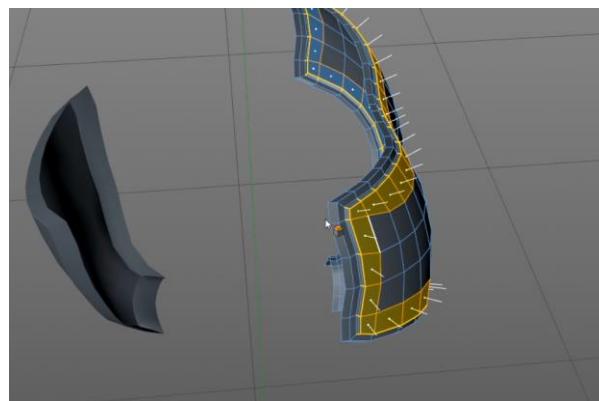
Split lalu extrude



Extrude inner bagian tersebut

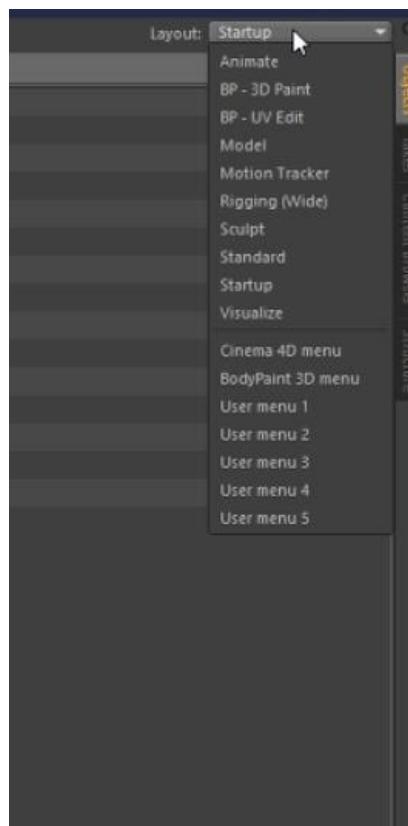


Seleksi bagian pantat

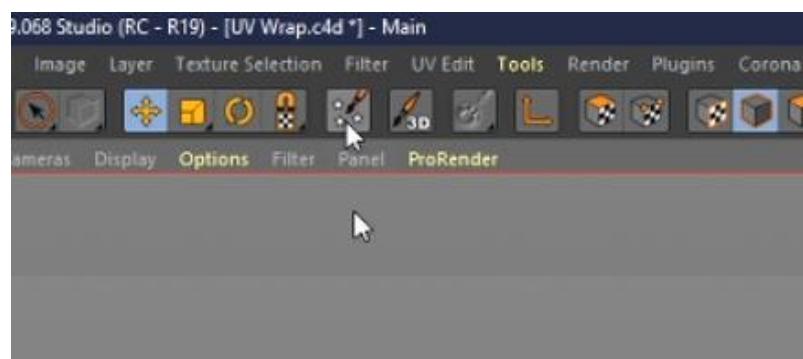


Gunakan metode yang sama yaitu extrude inner dan bevel

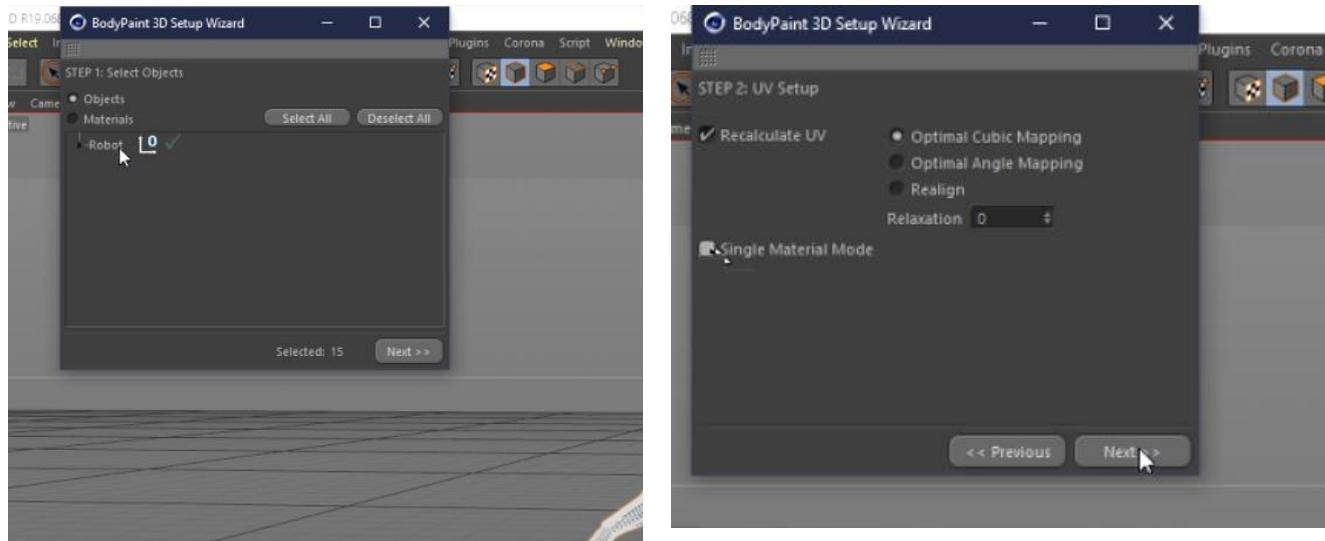
10. UV & Texturing



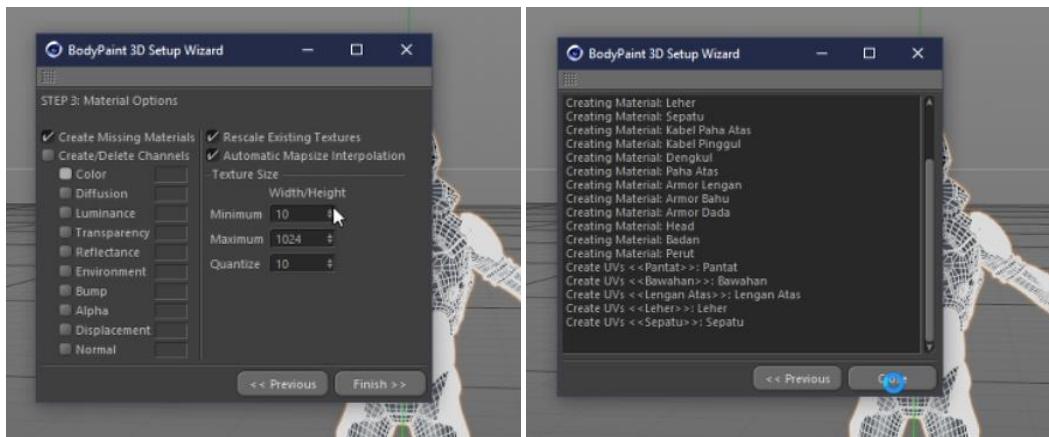
Ubah layout ke BP UV Edit



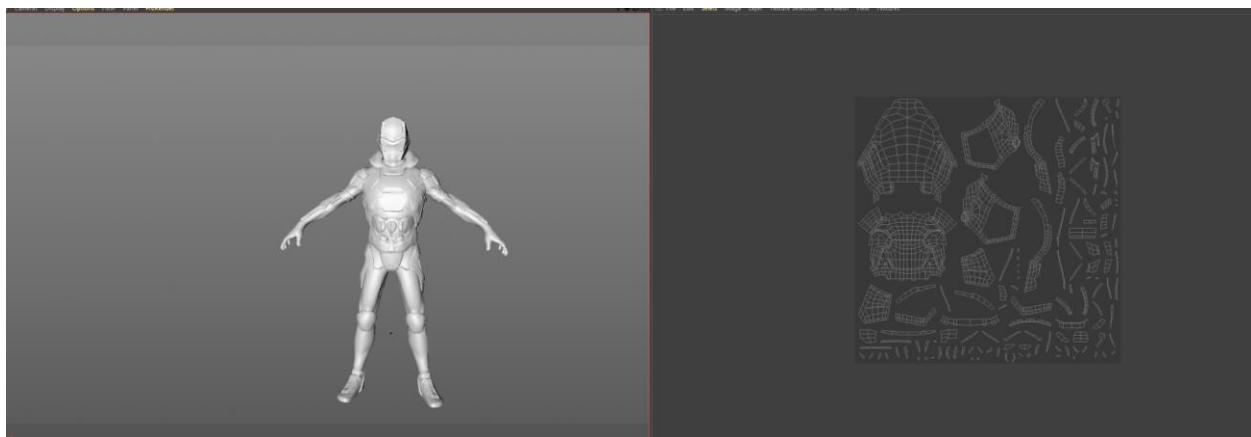
Pilih paint setup wizard



Select object dan recalculate UV, uncheck single material. Lalu klik next



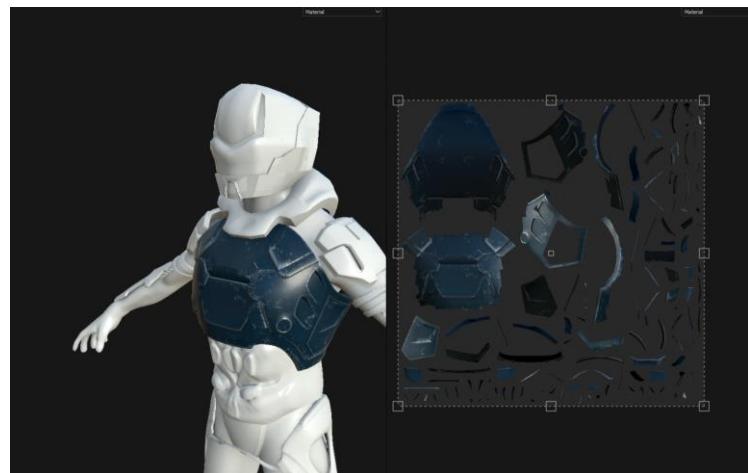
Checklist create missing materials lalu klik next, tunggu hingga proses selesai



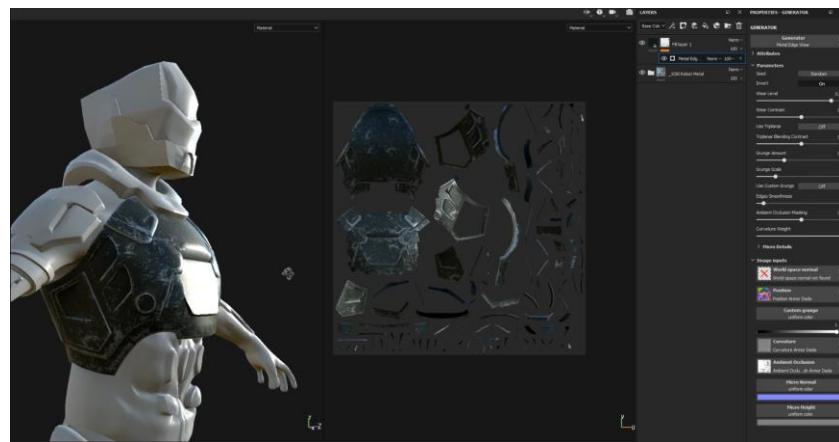
Setelah selesai, maka akan otomatis terlihat semua UV. Export sebagai OBJ



Masuk ke substance lalu import file OBJ hasil UV tadi



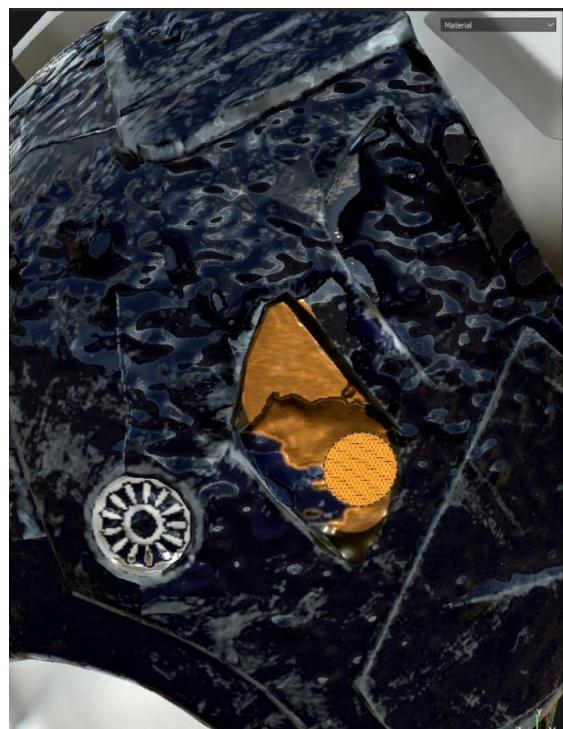
Tambahkan smart materials robot



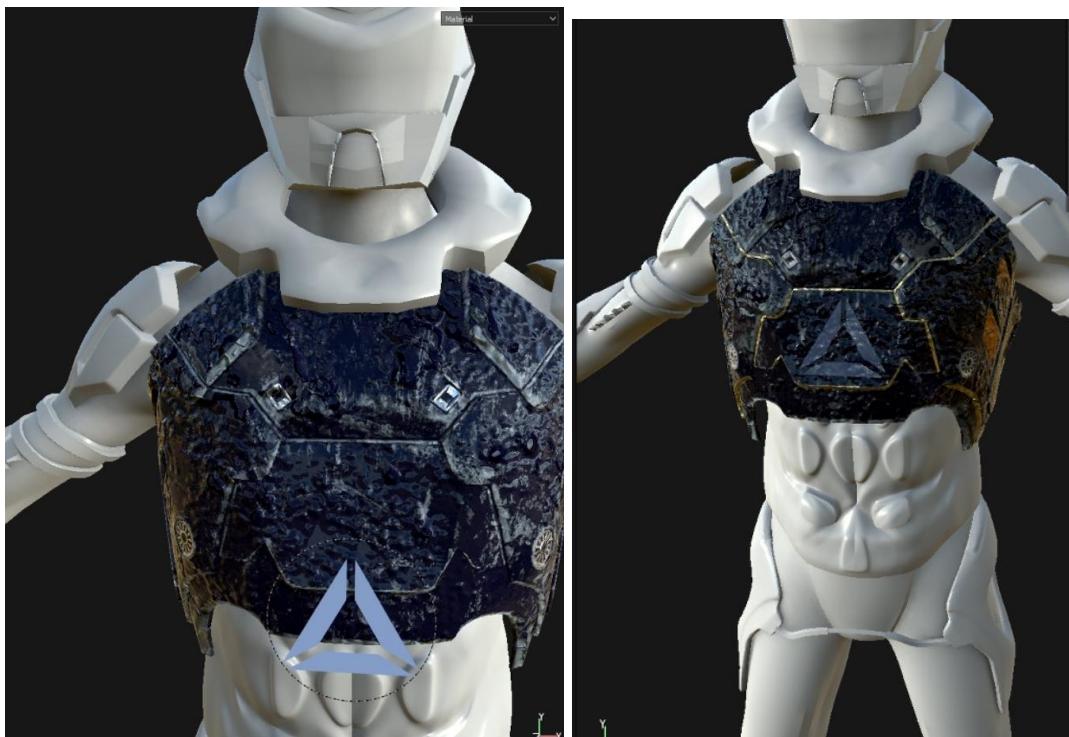
Tambahkan mask dan generator texture



Untuk memberikan efek timbul, menggunakan hardsurface brush

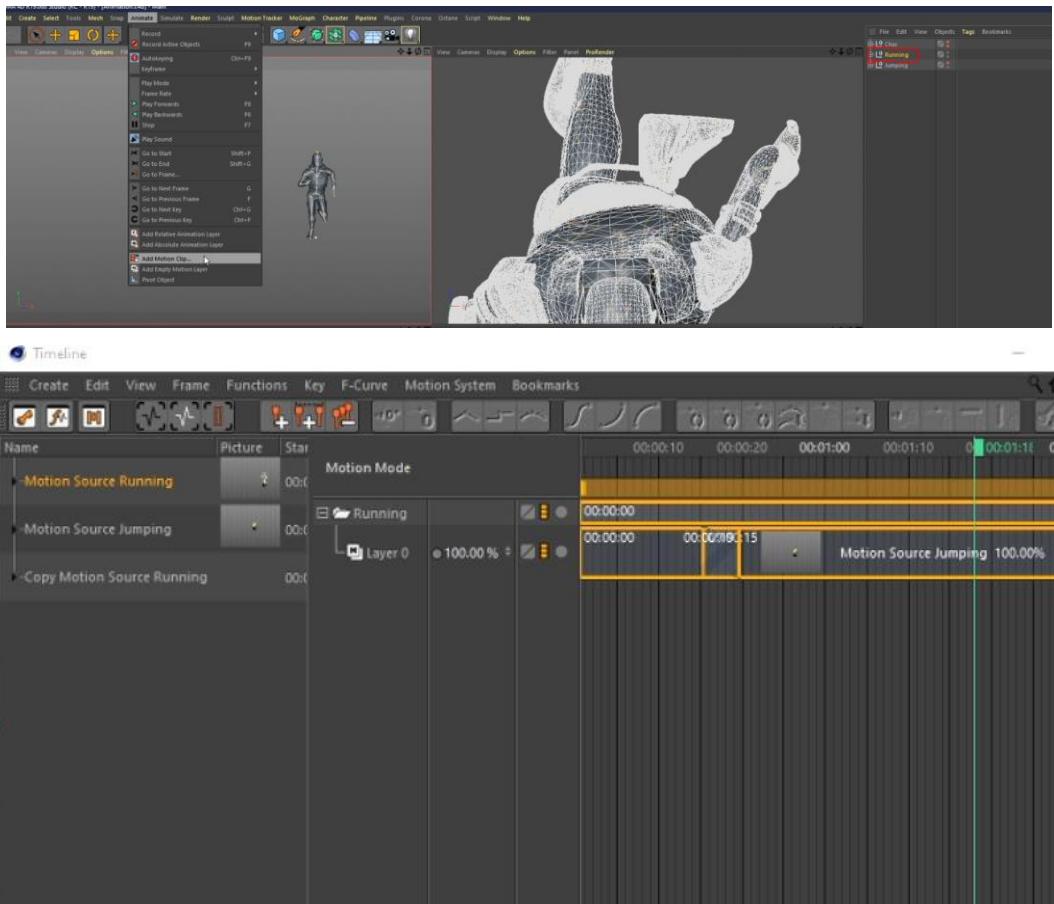


Paint bagian-bagian tertentu dengan texture brush

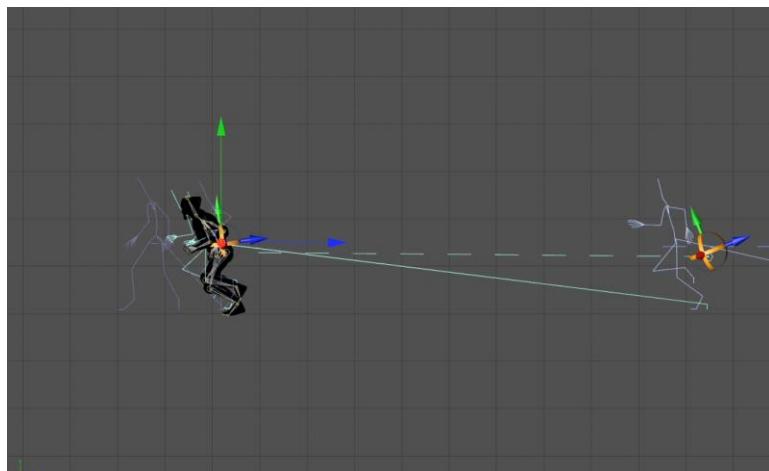


Tambahkan tato menggunakan alpha. Metode ini sama untuk semua bagian tubuh robot

11. Animating



Buat beberapa gerakan dasar, lalu gabung dengan motion clip. Atur motion clip di timeline



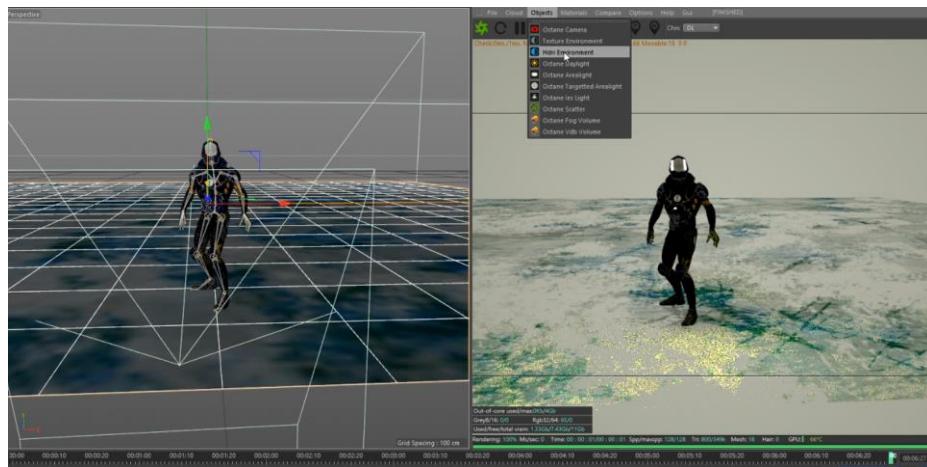
Atur posisi dengan aktifkan pivotnya

12. Apply Texture



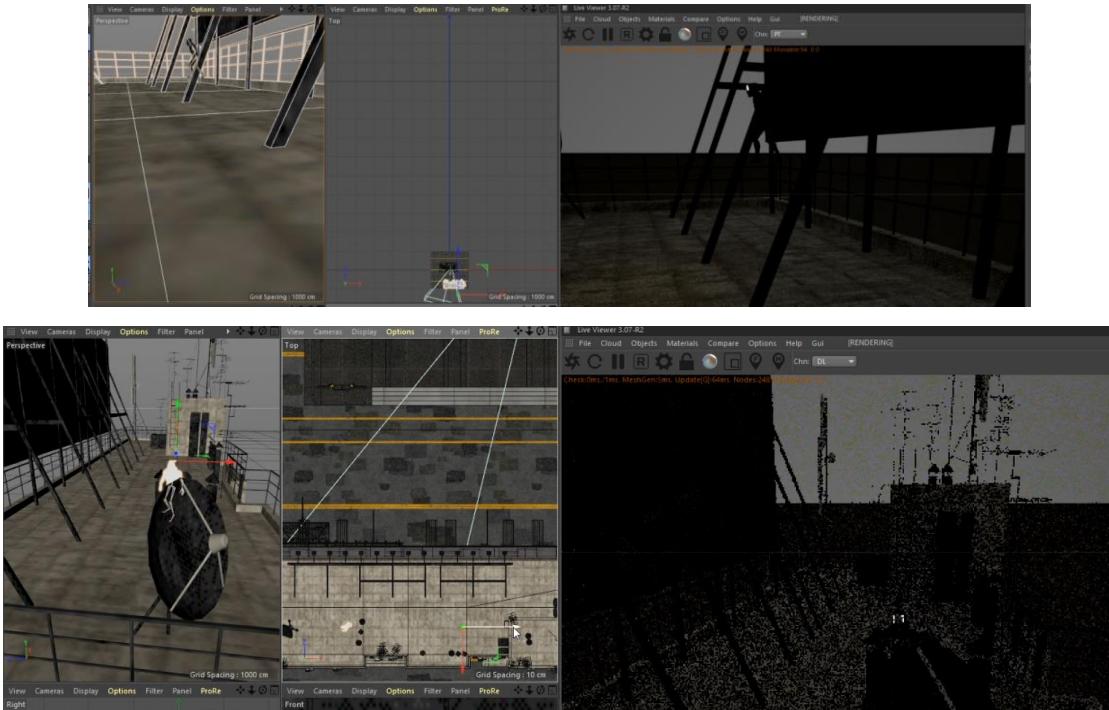
Jika gerakan sudah pas, maka apply texture yang sudah dibuat di substance ke dalam Cinema4D.

Apply texture menggunakan octane material dan image texture diinput melalui node editor

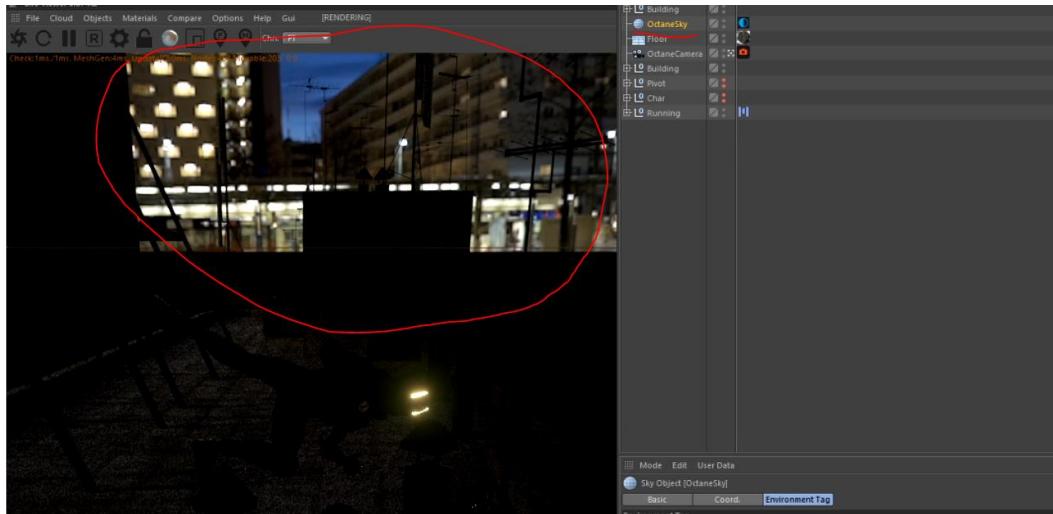


Jika semua sudah di apply, hasilnya akan seperti ini

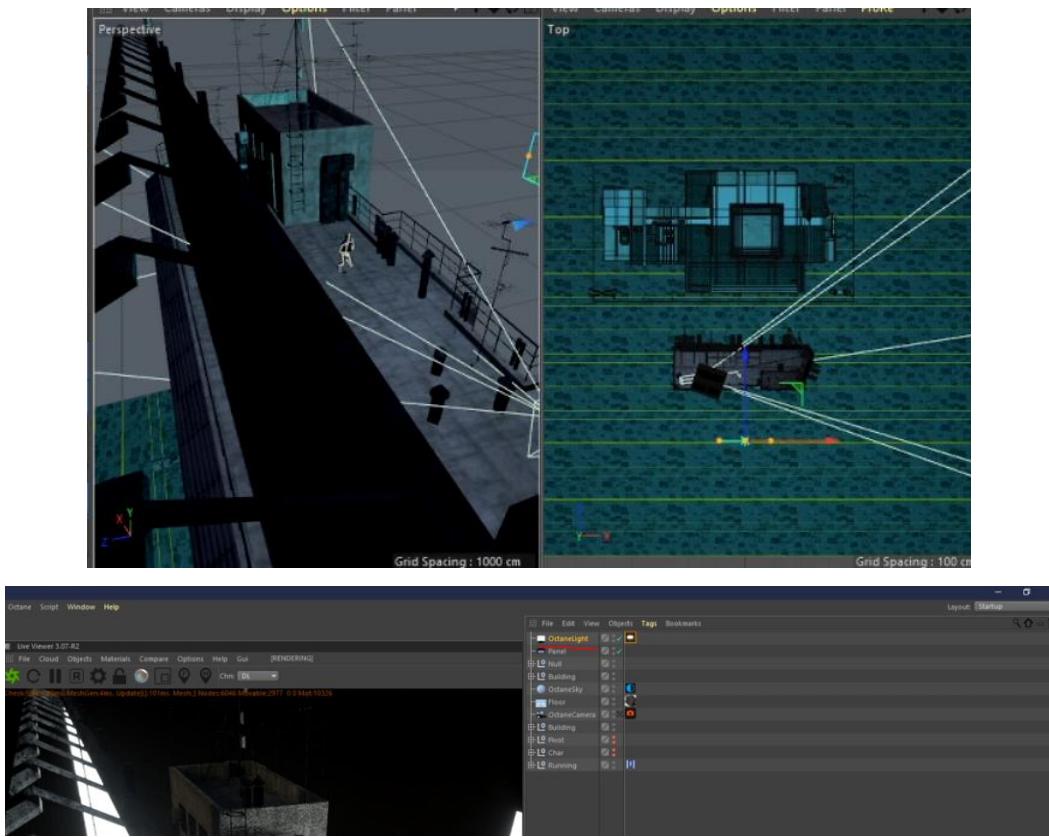
13. Lighting & Camera



Jika menggunakan texture octane, di live preview sudah terlihat objek walaupun tanpa lighting. Untuk membuat lebih cinematic, background akan diganti dengan OctaneSky. Dan preview dilihat menggunakan octane camera

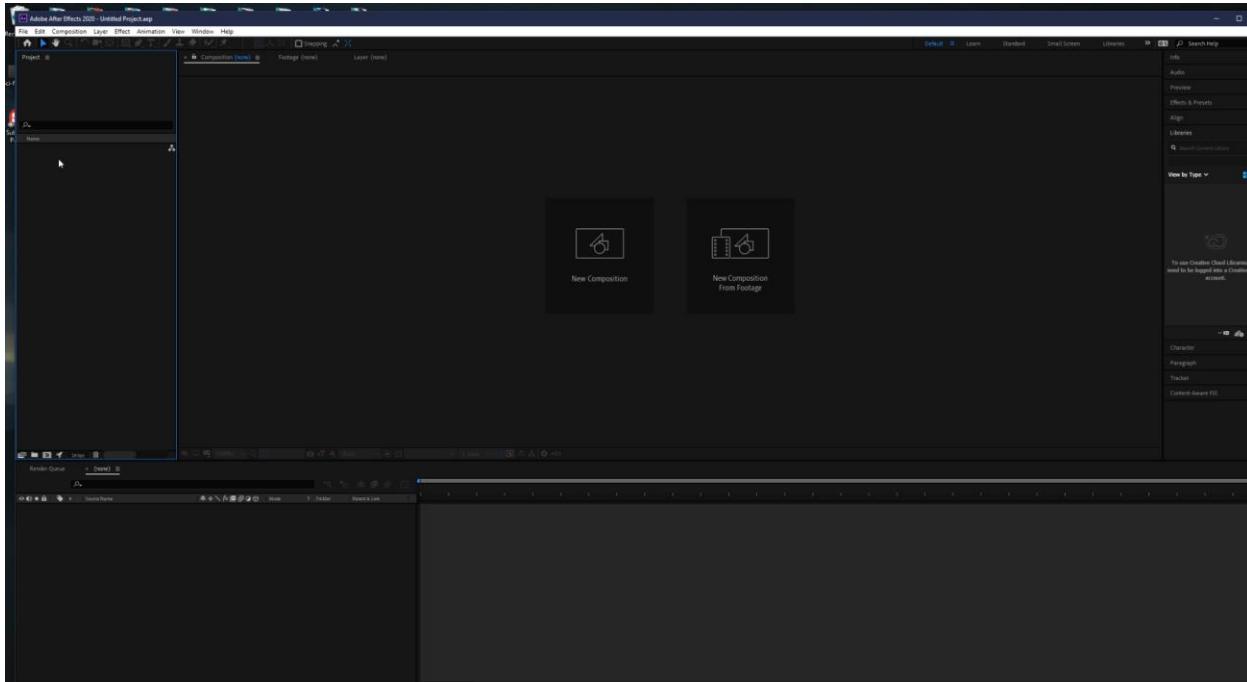


Jika sudah ditambahkan octanesky akan seperti ini

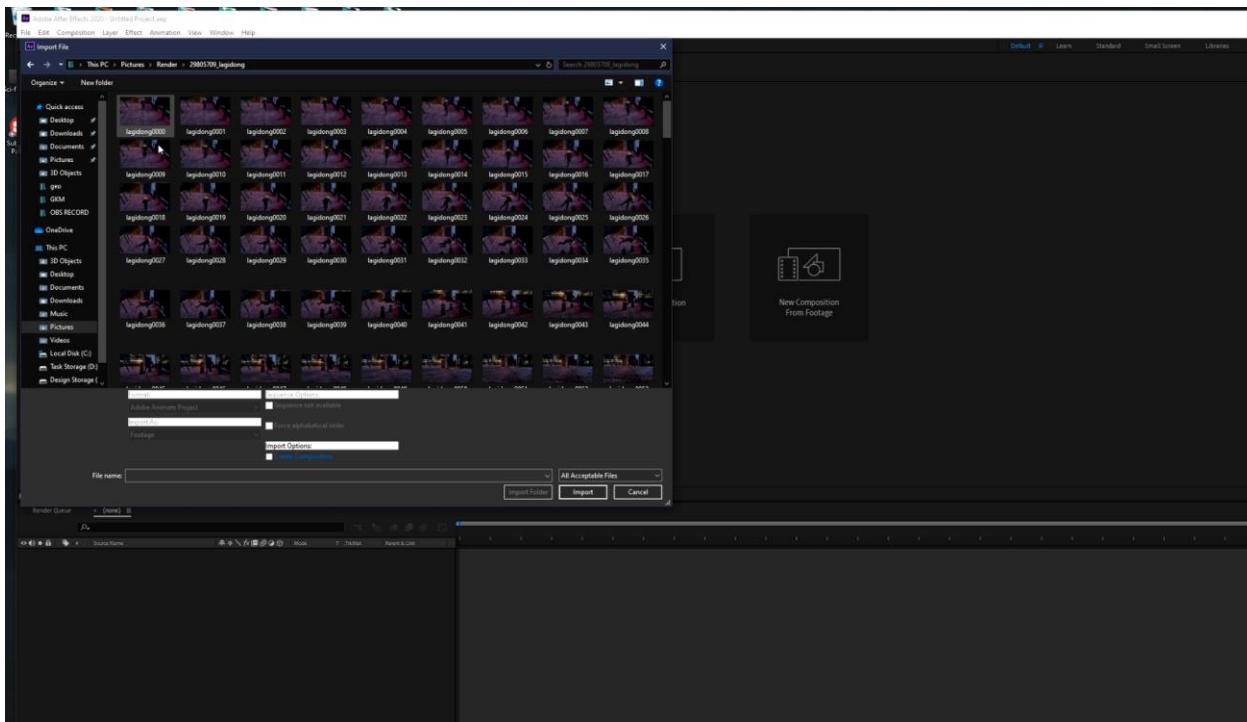


Tambahan lighting yang lain yaitu octane area light. Jika lighting dan camera sudah pas, maka lakukan render.

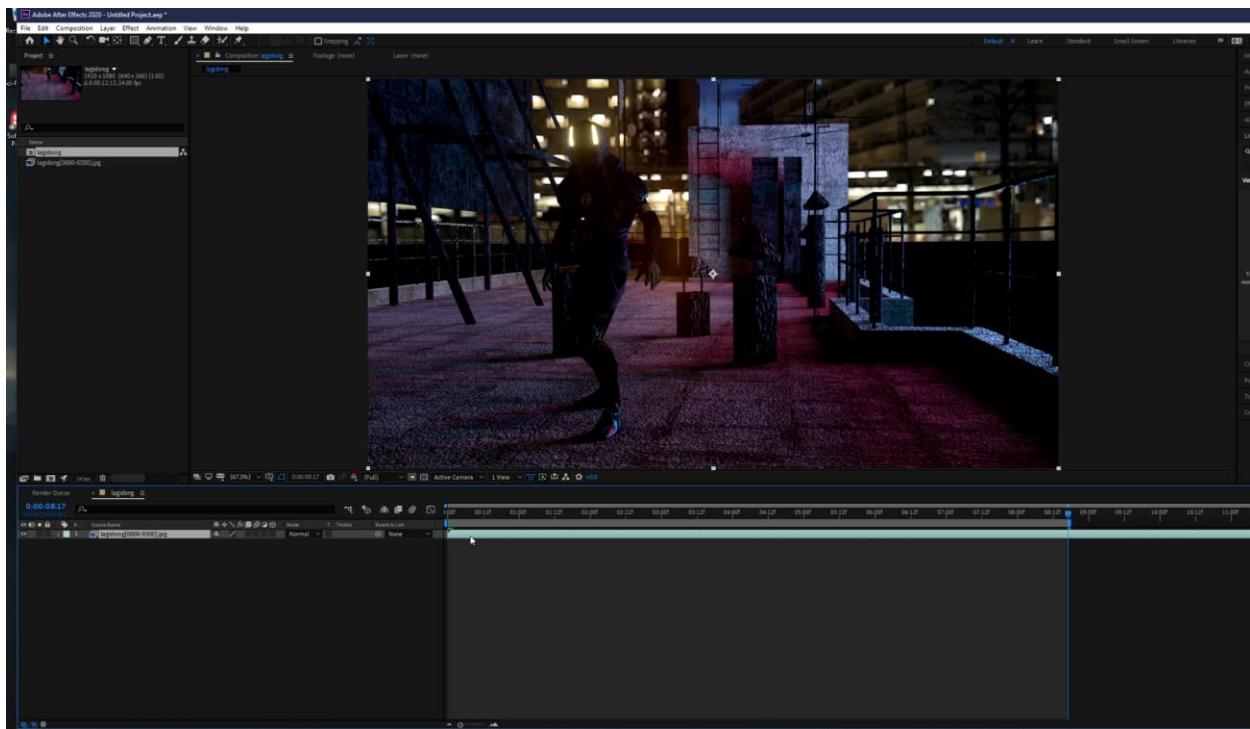
14. Compositing



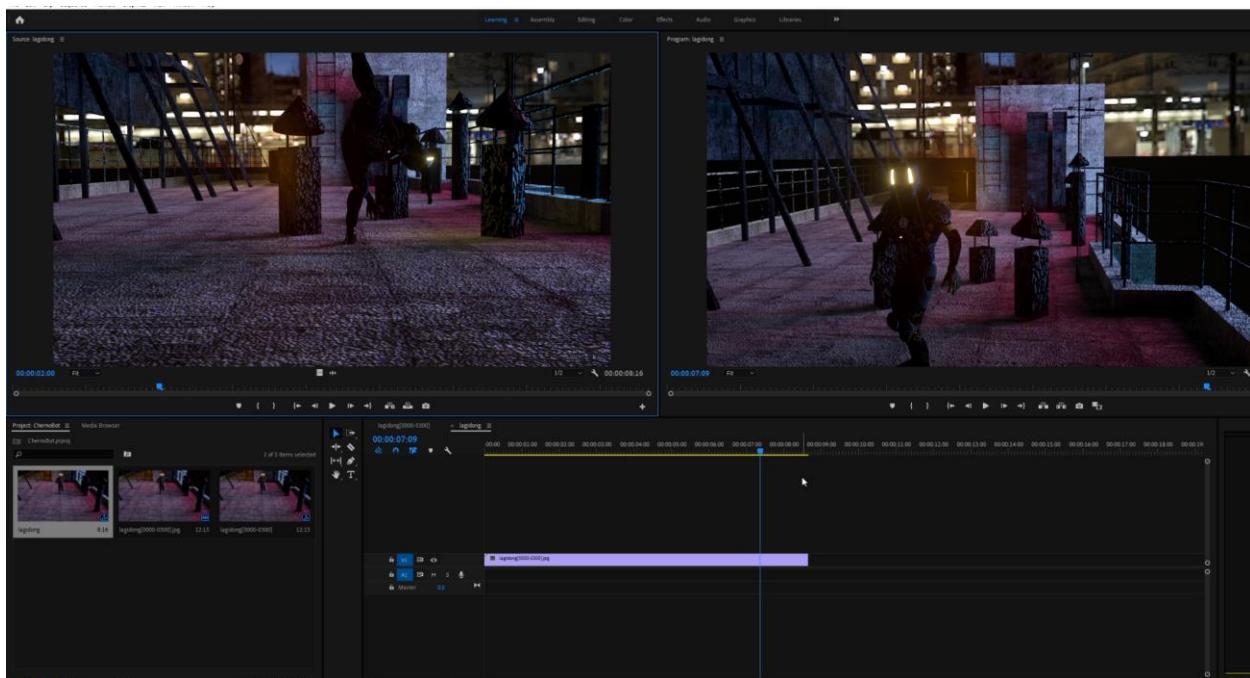
Masuk After Effect



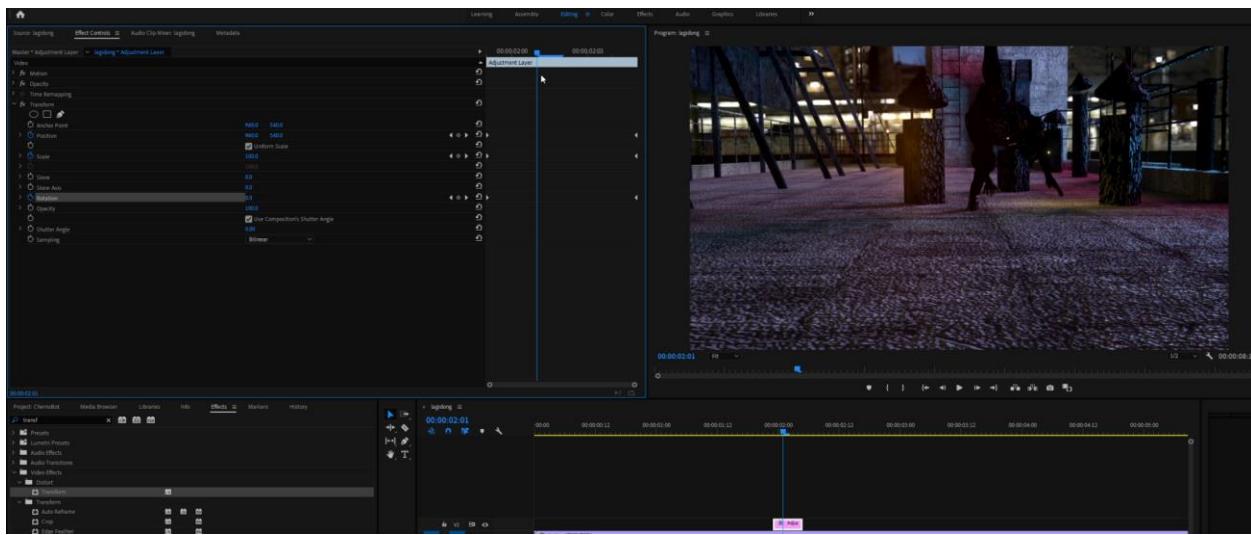
Import file render, checklist import JPG sequence



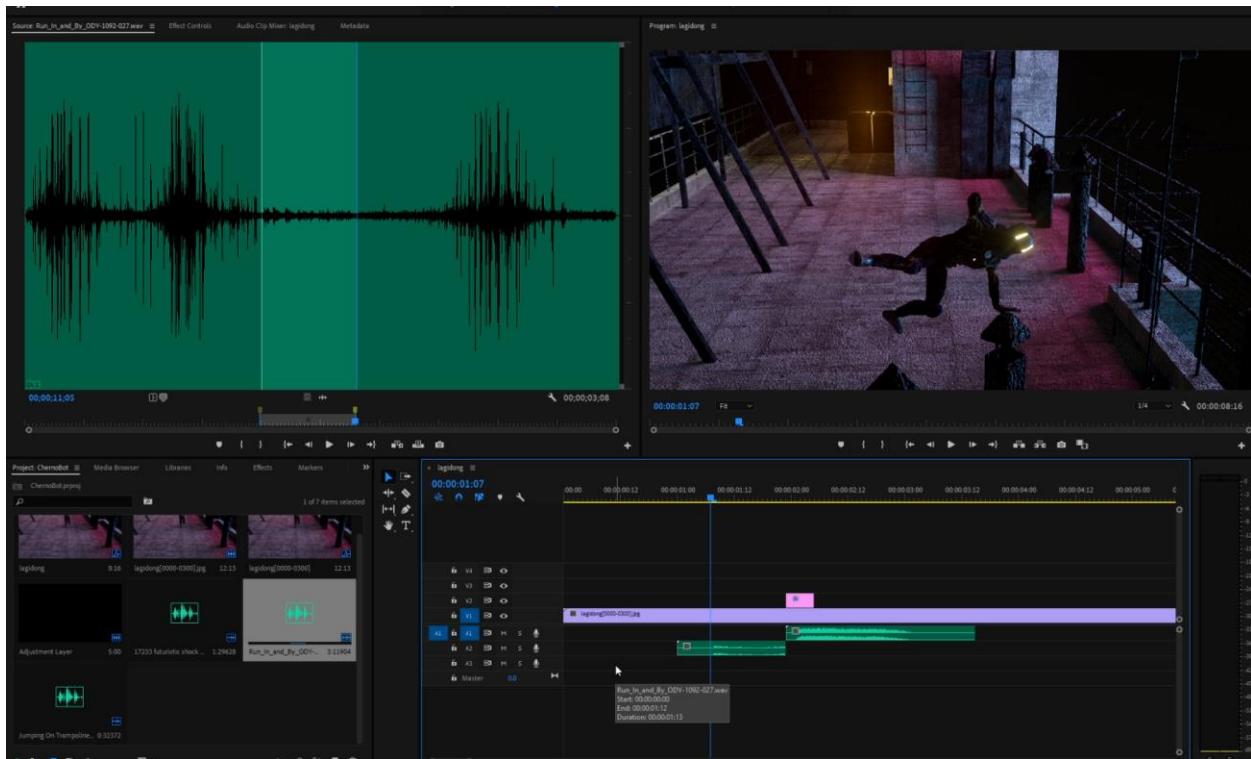
Jika sudah, lalu oper ke Premiere Pro



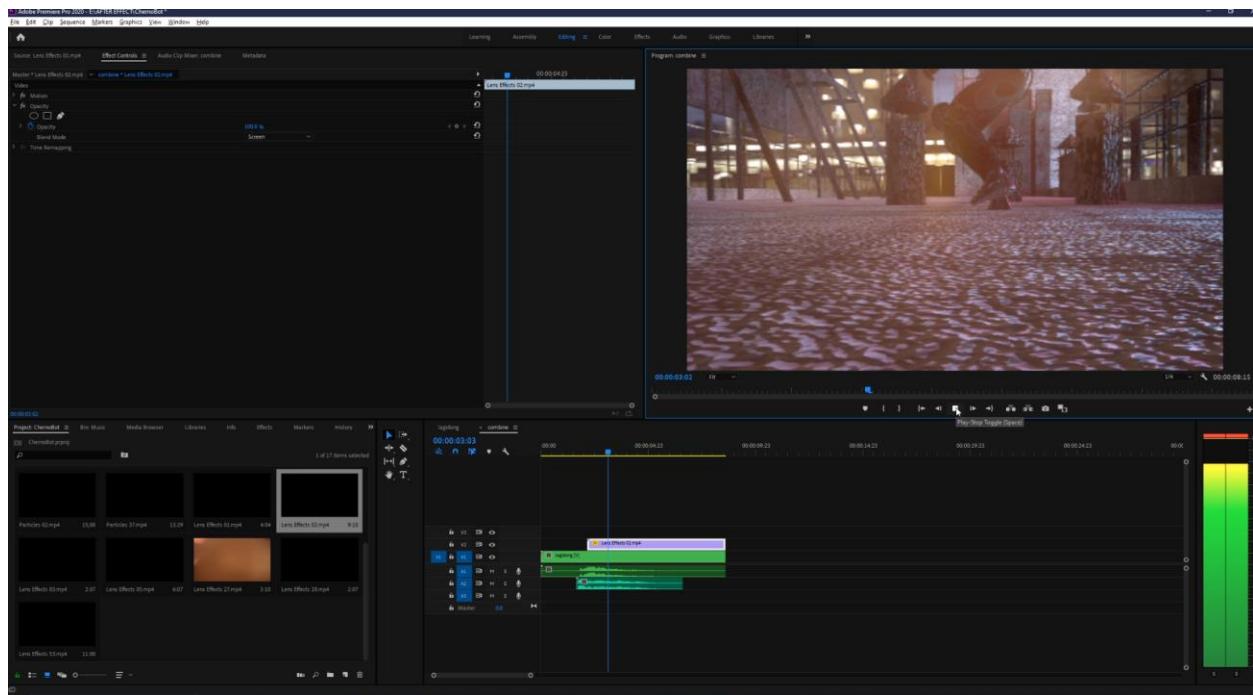
Drag file ke timeline



Tambahkan adjustment layer untuk efek shake



Tambahkan sound effect



Tambahkan flare effect dari stock video. Selesai