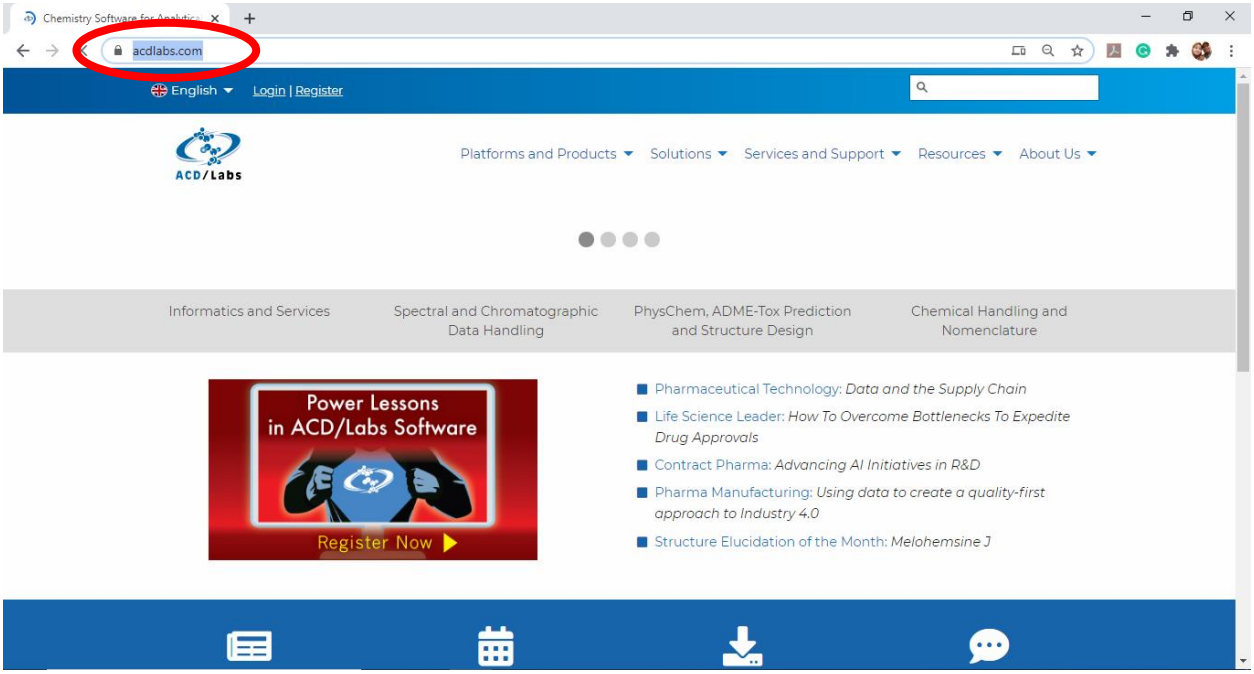
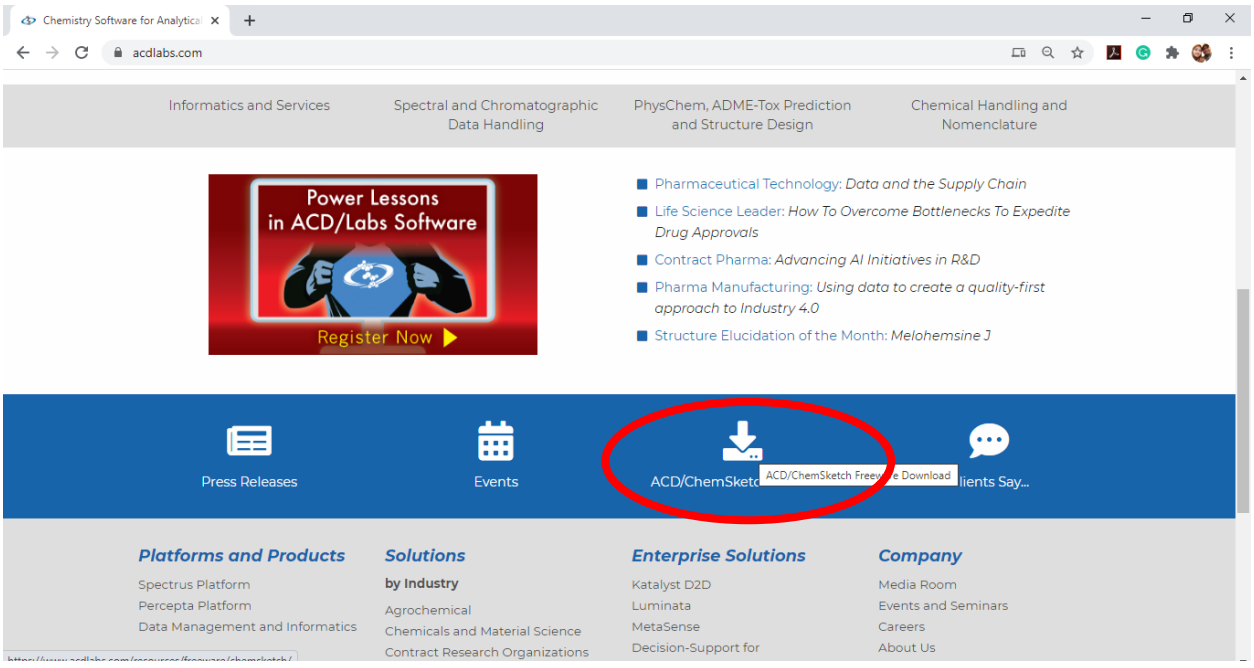
BAB I. Cara Install ChemSketch

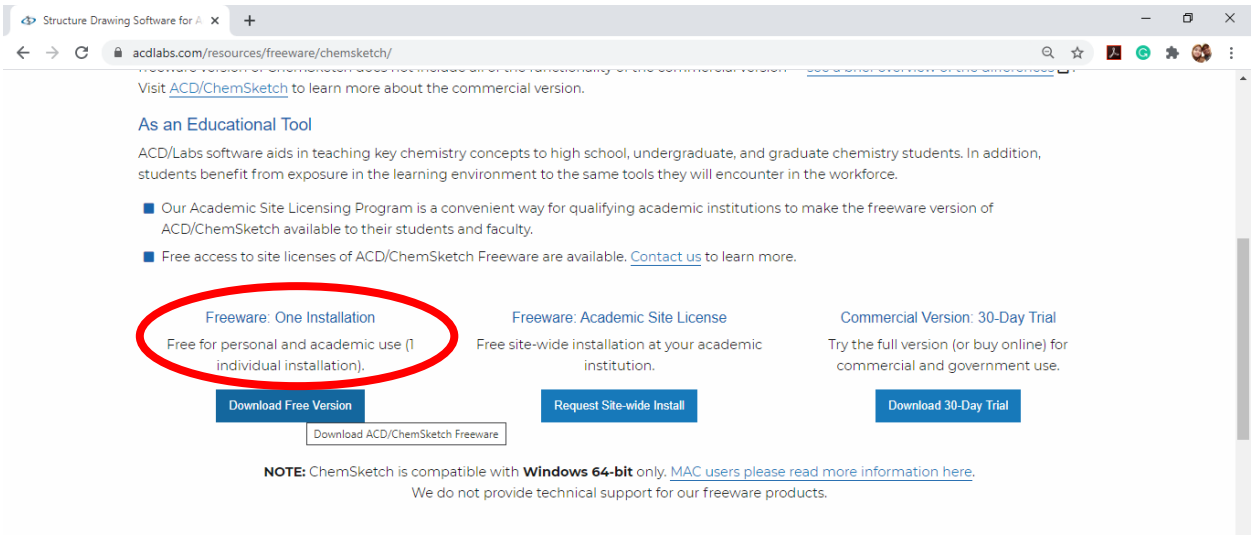
I.1. Buka situs/ web https://www.acdlabs.com/



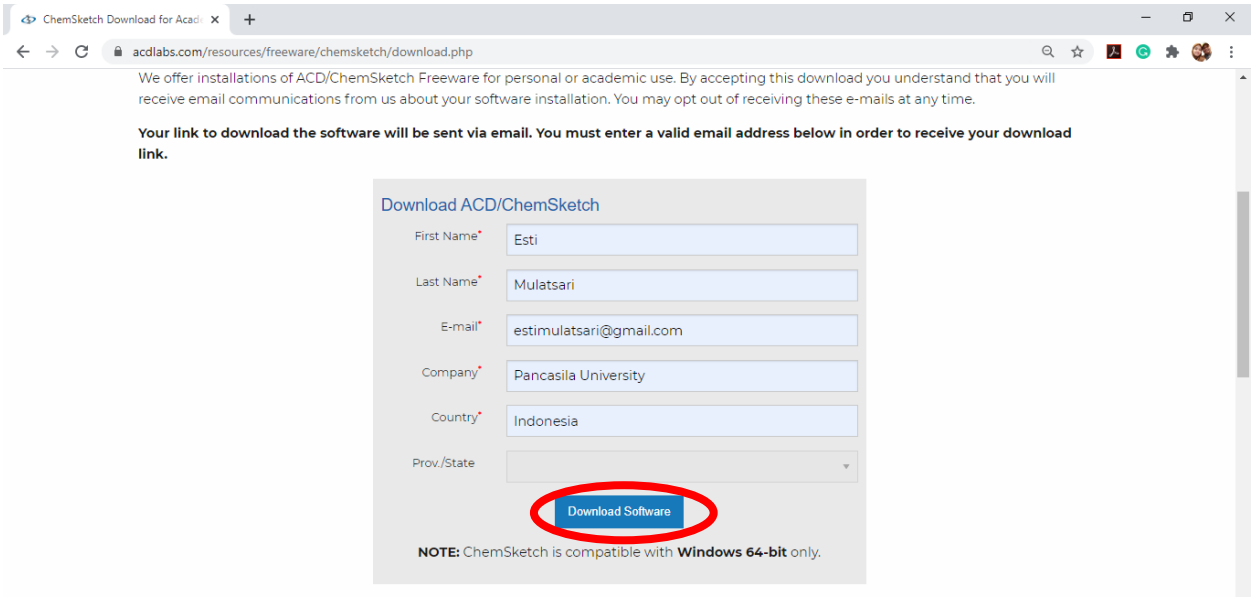
I.2. Klik ACD/ChemSketch Freeware



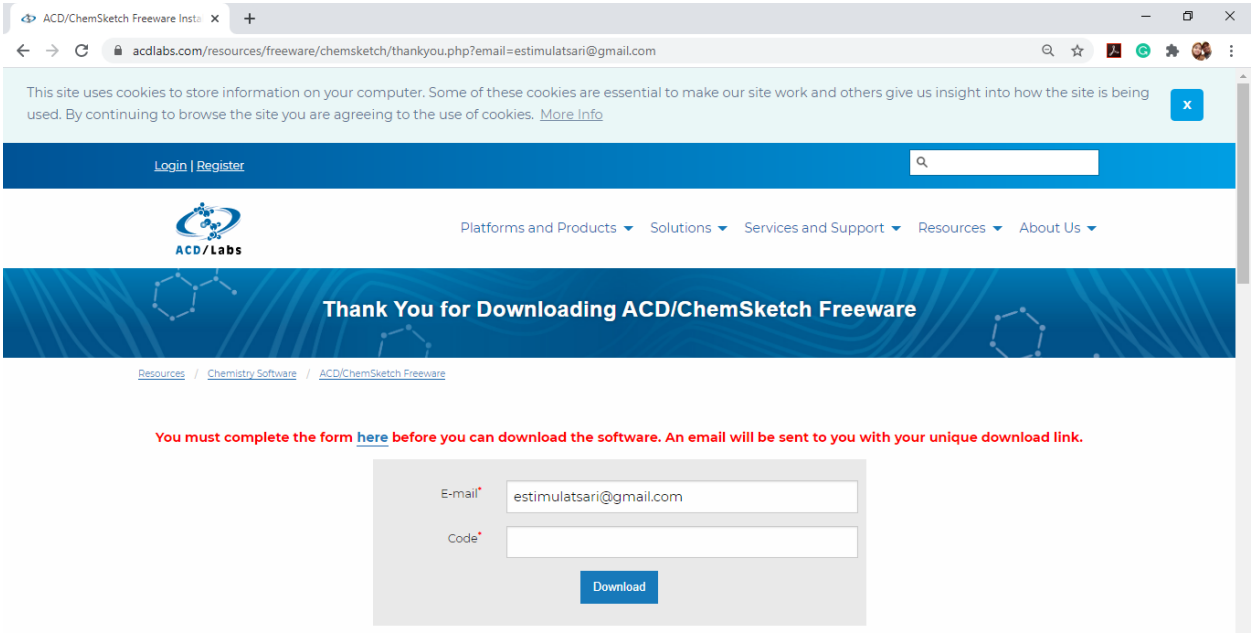
I.3. Klik Download Free Version

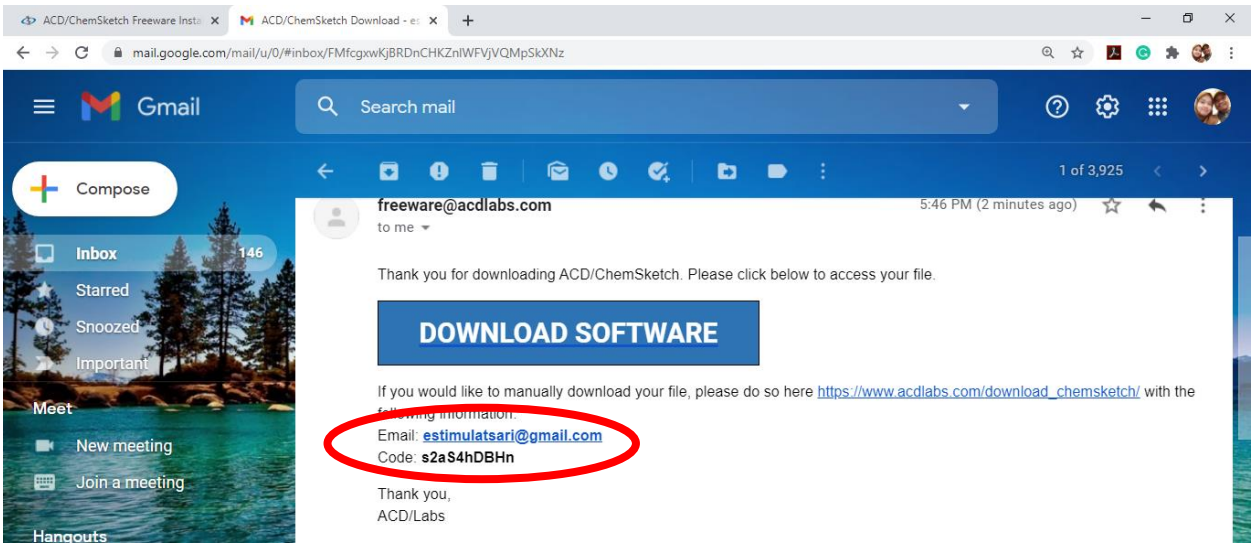


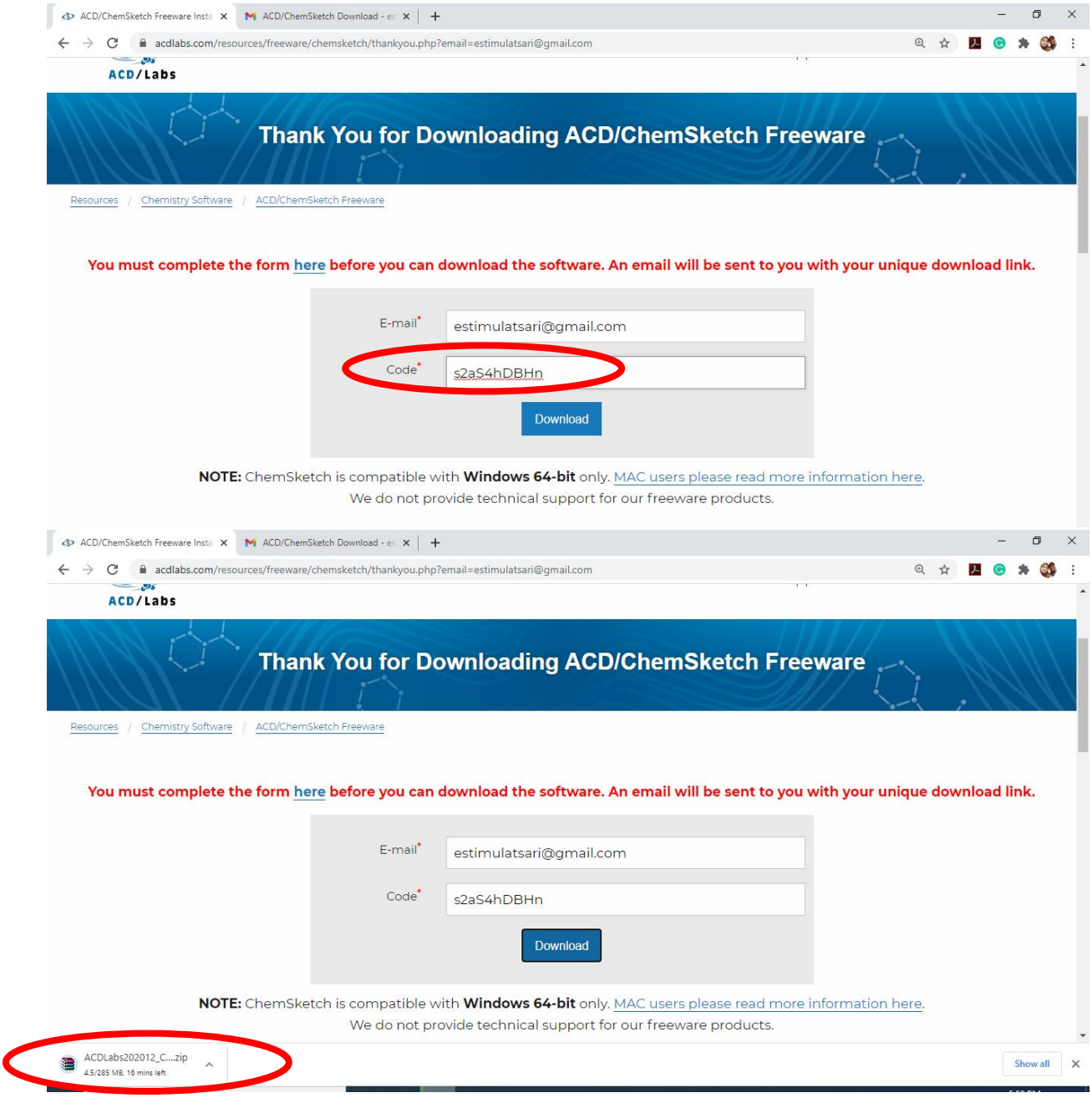
I.4. Isi isian data yang disediakan → Klik Dowload Software



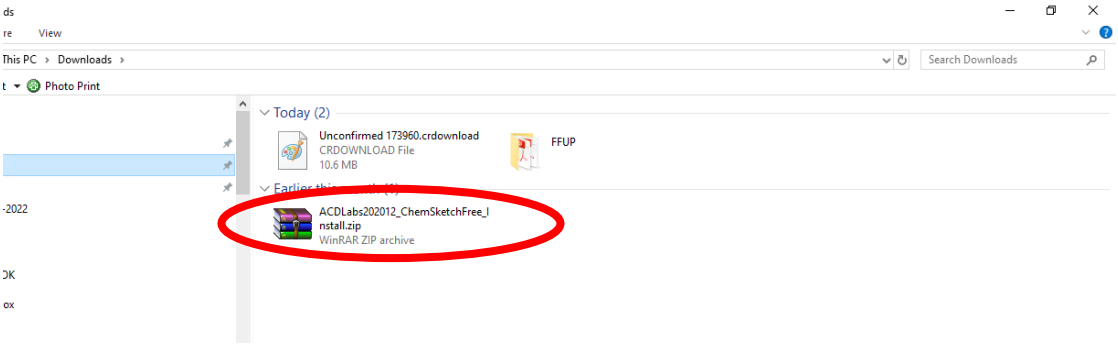
I.5. Secara otomatis anda akan menerima kode unik di email yang anda isikan di data, Lanjutkan dengan membuka email dan isikan code pada kolom code selanjutnya klik Download , secara otomatis akan mendownload software



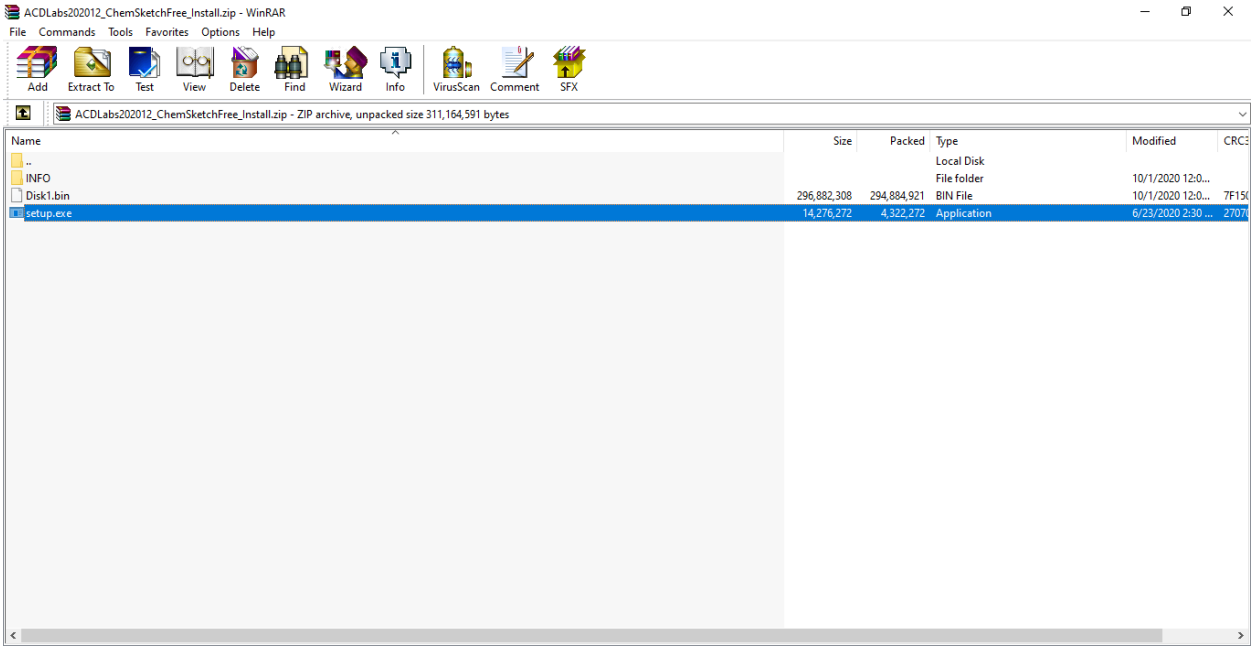




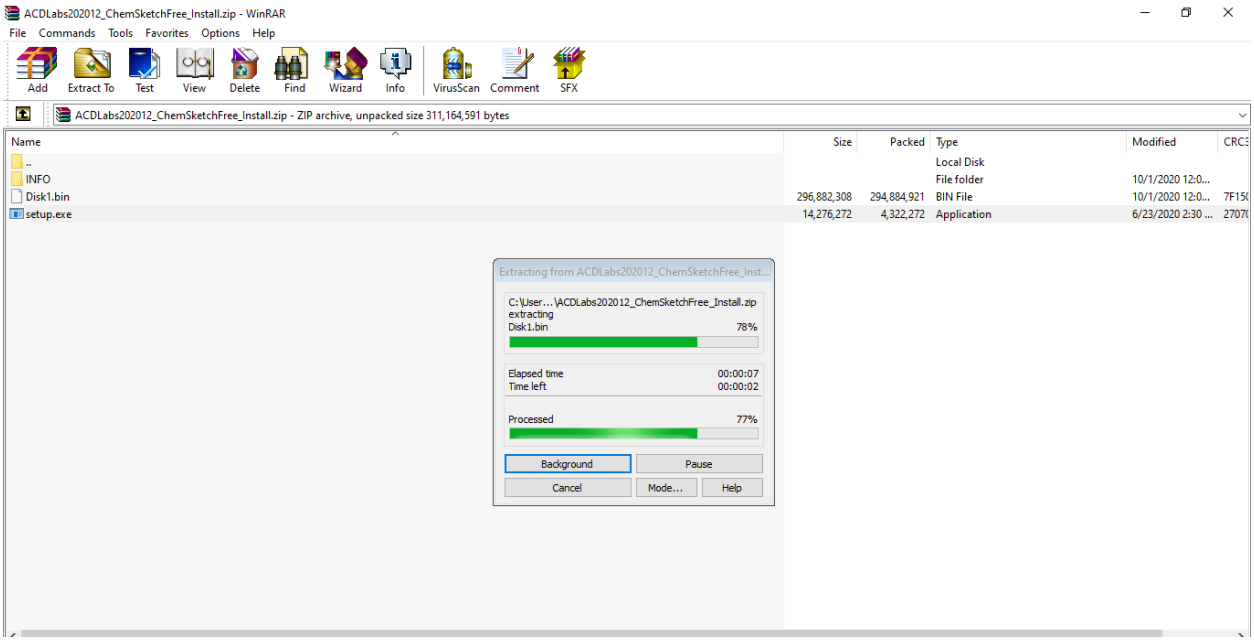
I.5. Apabila proses download sudah selesei, Software bisa diakses di Directory



I.6. Buka File, Klik setup.exe hingga muncul proses install dimulai



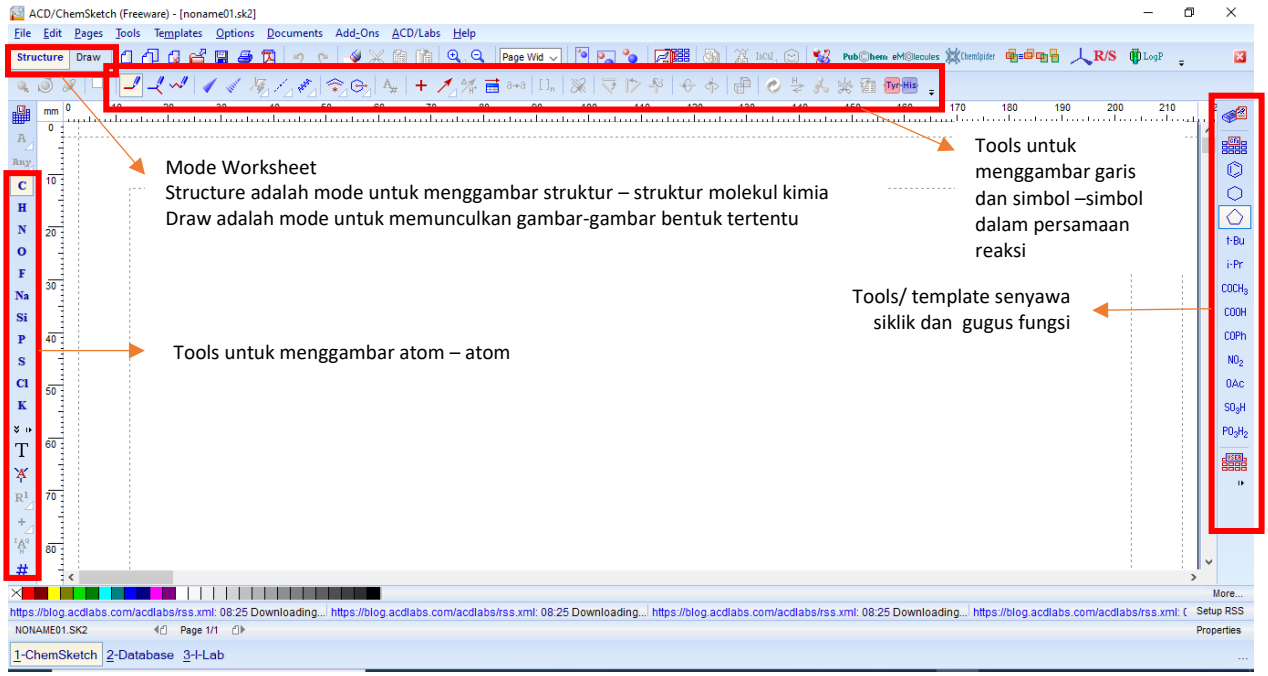
I.7. Tampilan proses intallasi dimulai, ikuti command yang muncul setiap tahapnya hingga Finish



BAB II. Mengenal Tools Tools dalam ChemSketch

II.1. Pastikan bahwa ChemSketch sudah terinstall di PC masing – masing

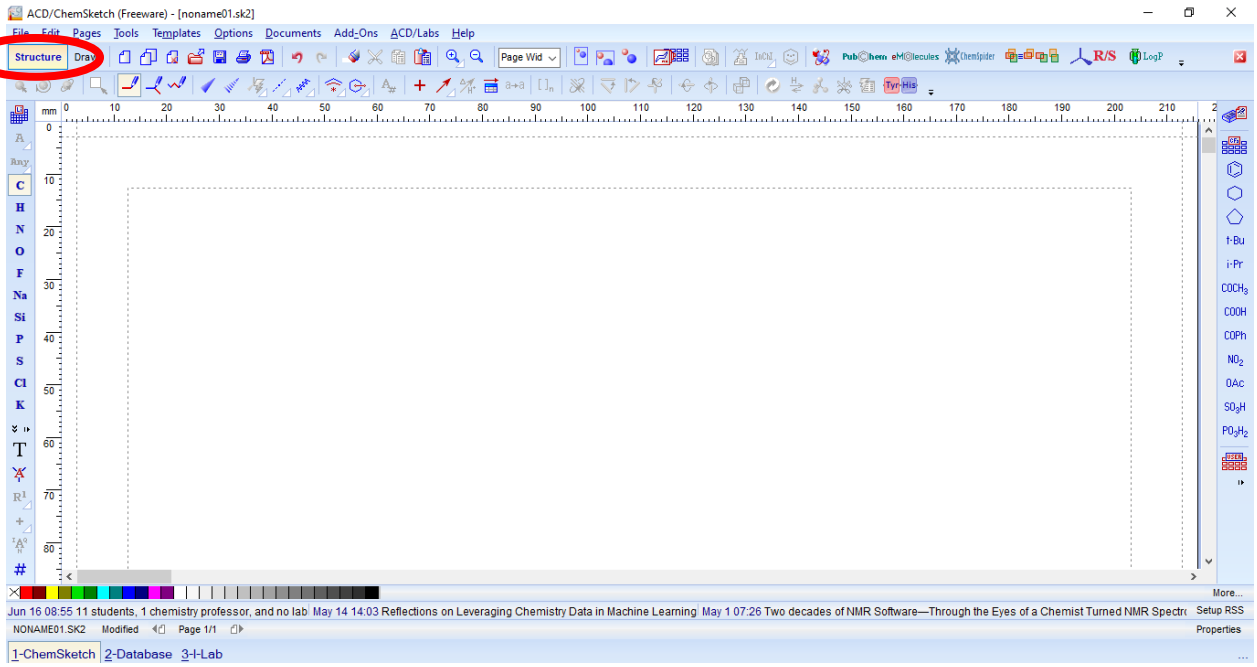
Pada lembar kerja, ChemSketch tersedia dua mode yaitu mode Structure yang memiliki fungsi untuk menggambar stuktur – struktur molekul, dan mode Draw untuk menuliskan persamaan reaksi atau gambar gambar lainnya.



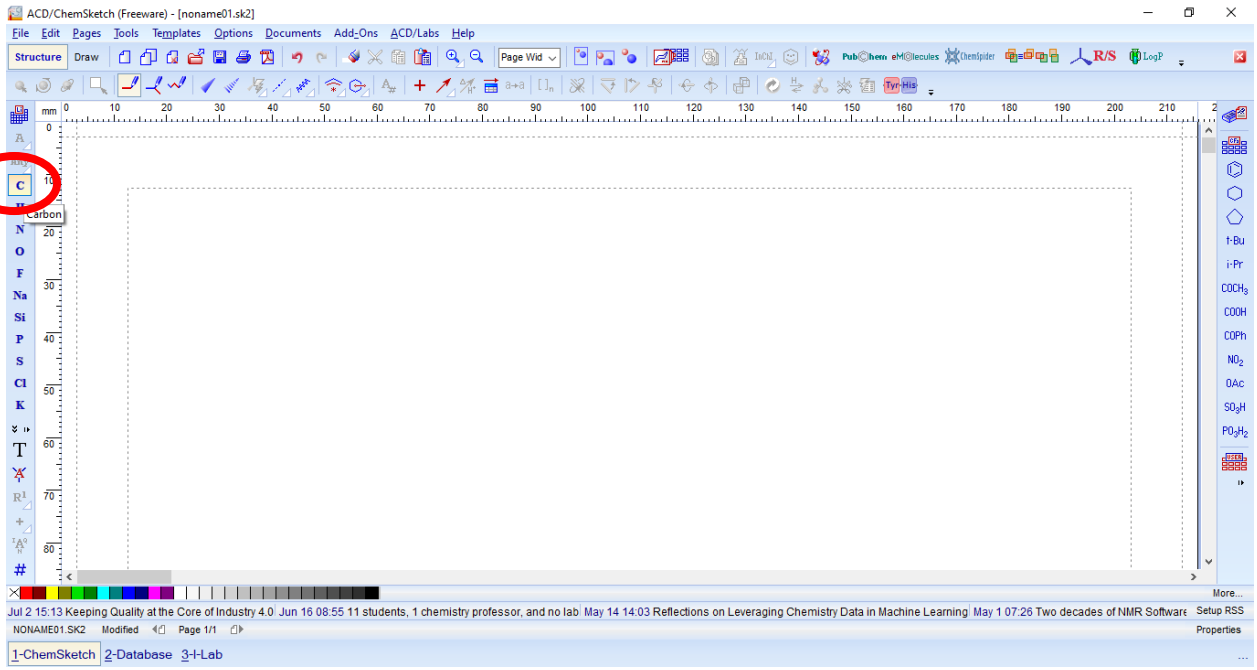
BAB III. Menggambar Senyawa Hidrokarbon

Contoh : menggambar Senyawa 2,3-dimetil propana

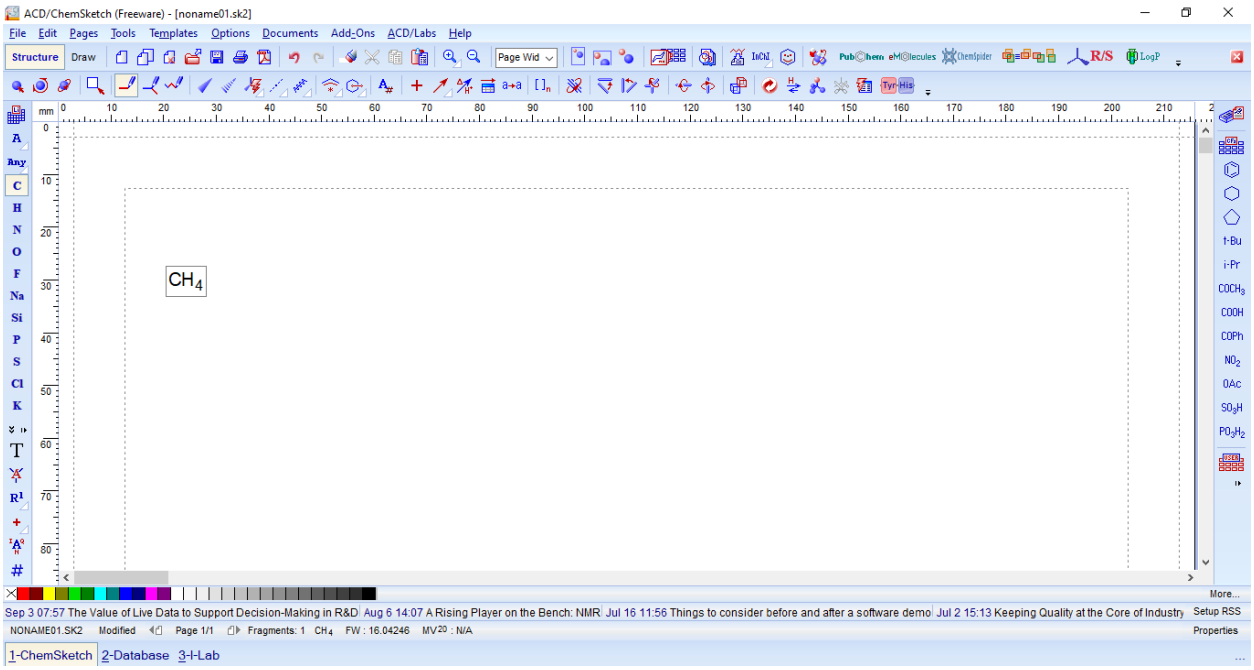
III.1. Pastikan worksheet dalam mode Structure



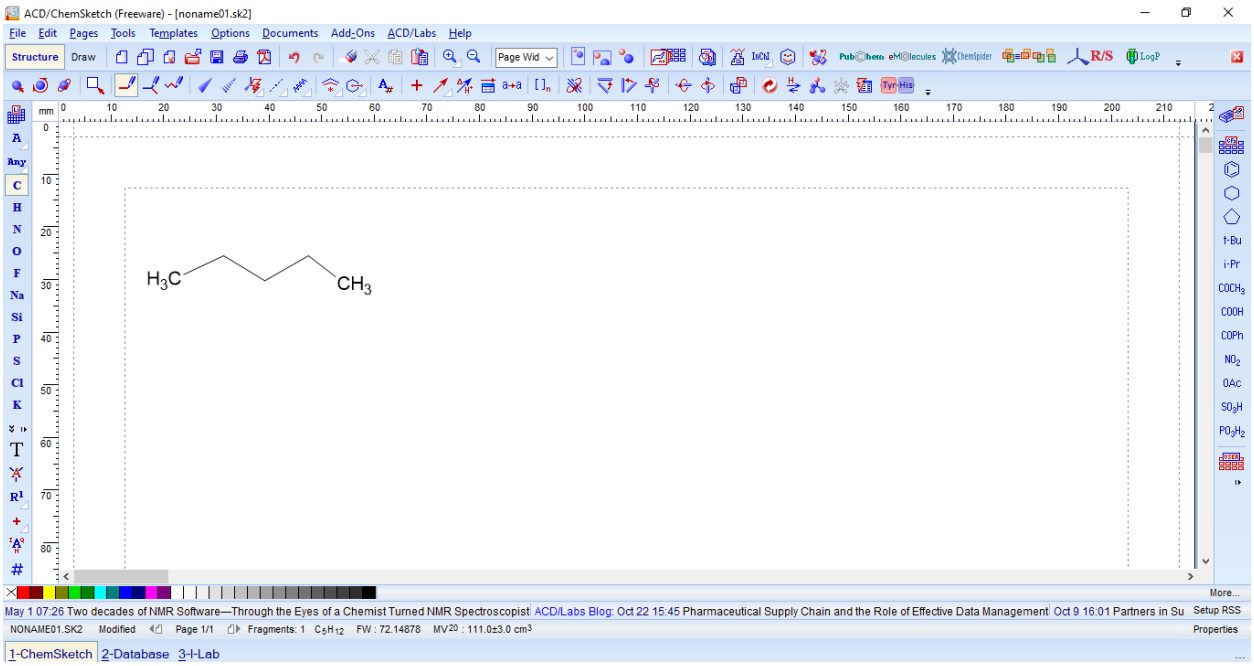
III.2. Aktifkan tools atom Carbon dengan cara klik sekali



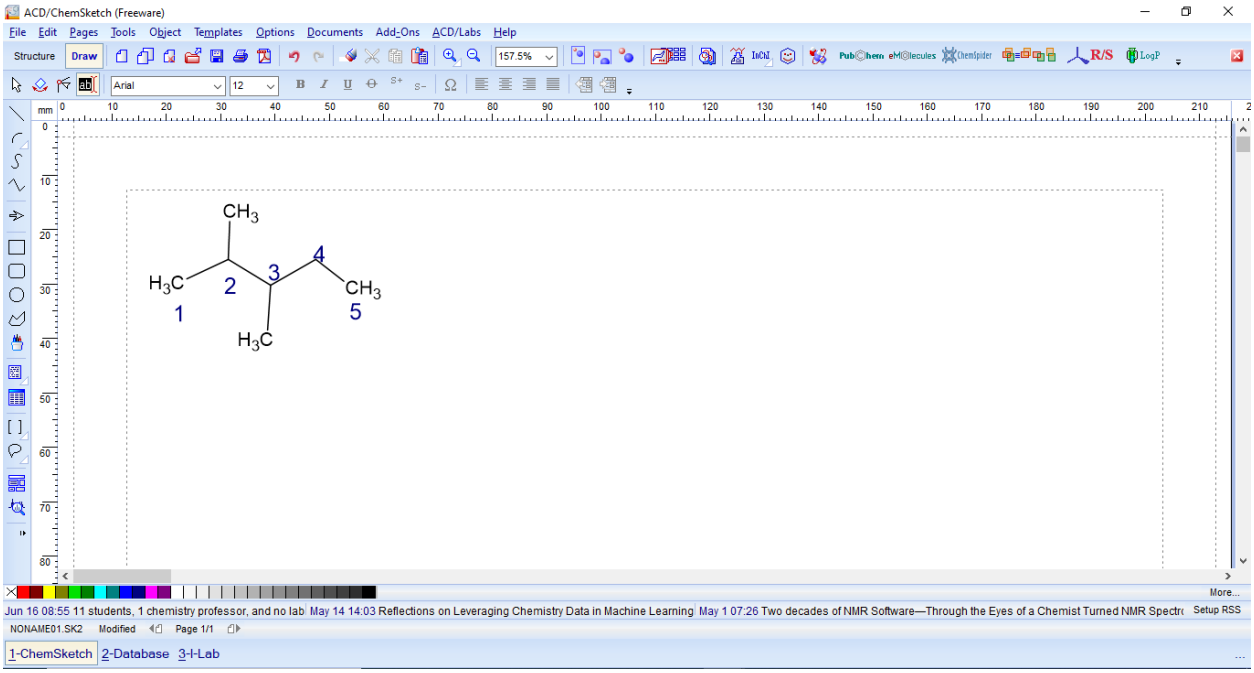
III.3. Klik sekali pada lembar kerja akan muncul struktur CH4



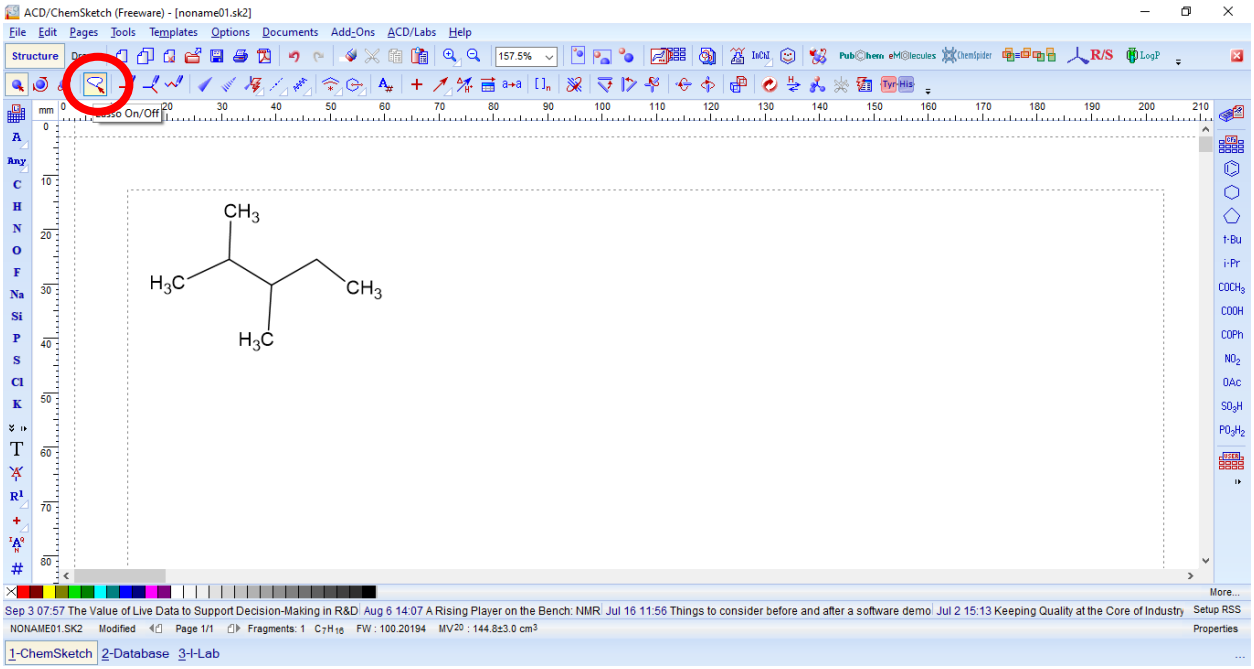
III.4. Lanjutkan proses menambahkan atom karbon sesuai jumlah atom C dalam kerangka induk dalam hal ini 5 atom C



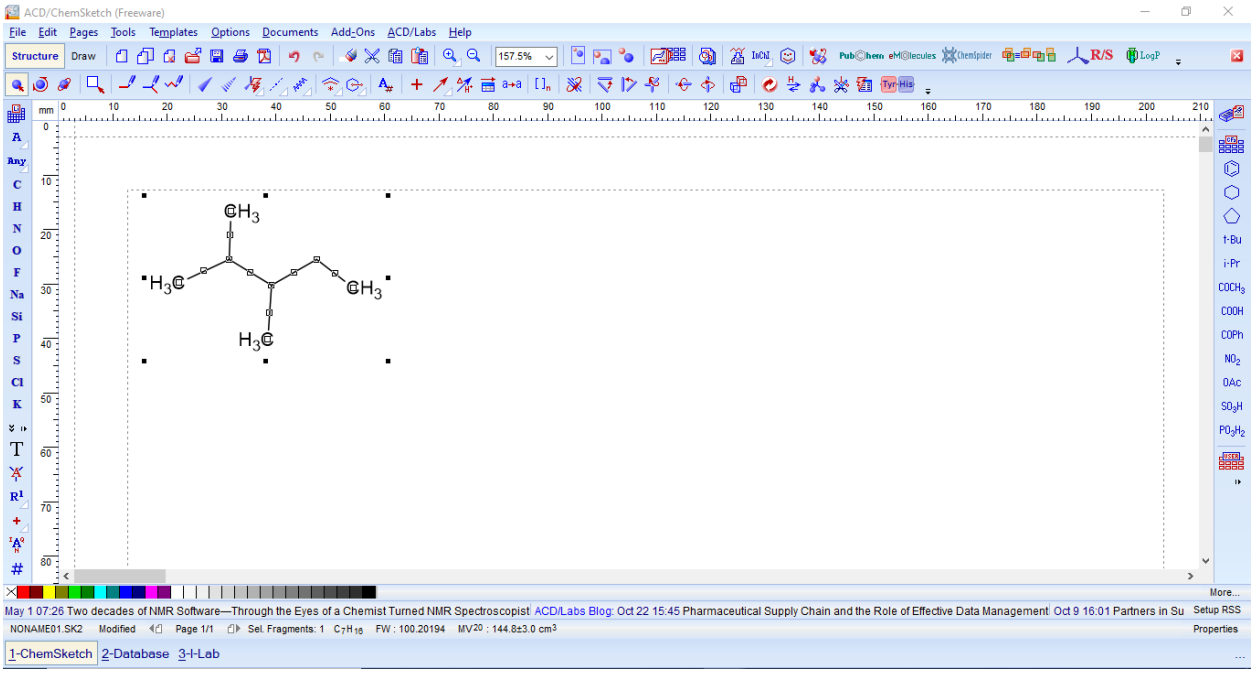
III.5. Tambahkan rantai cabang pada atom C yang dituju dalam contoh adalah C no 2 dan 3



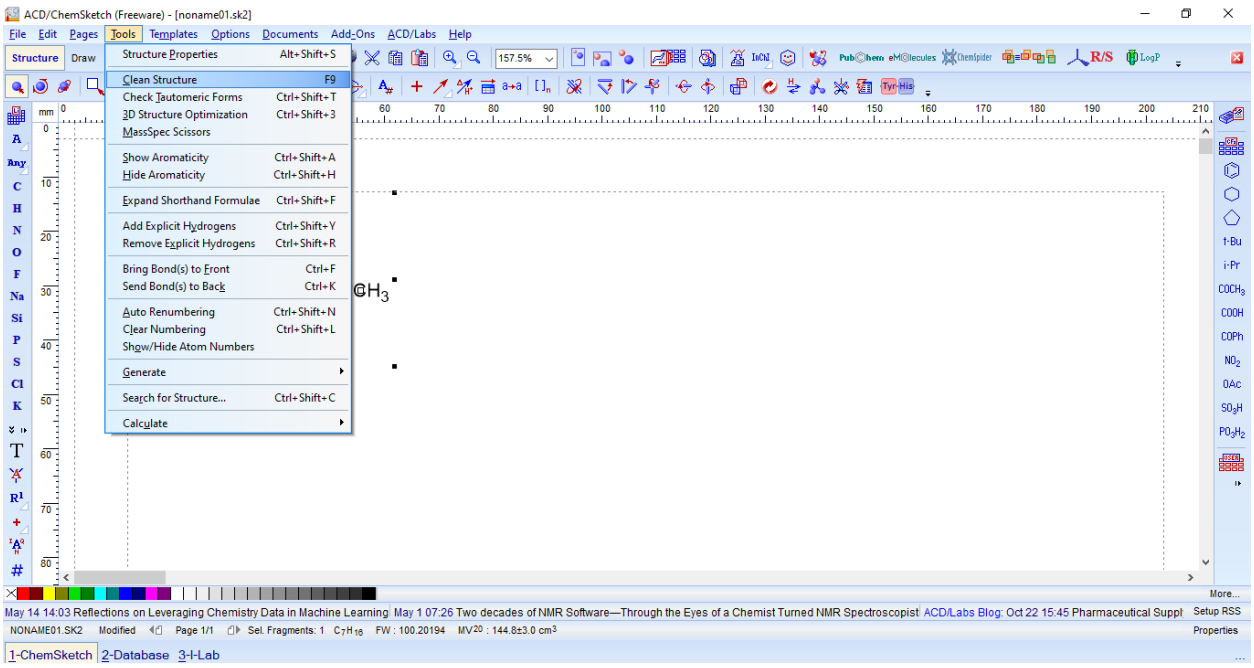
III.6. Sudah terbentuk 2,3-dimetil propana akan tetapi struktur masih tidak rapi, selanjutnya dirapikan dengan cara : aktifkan menu lasso



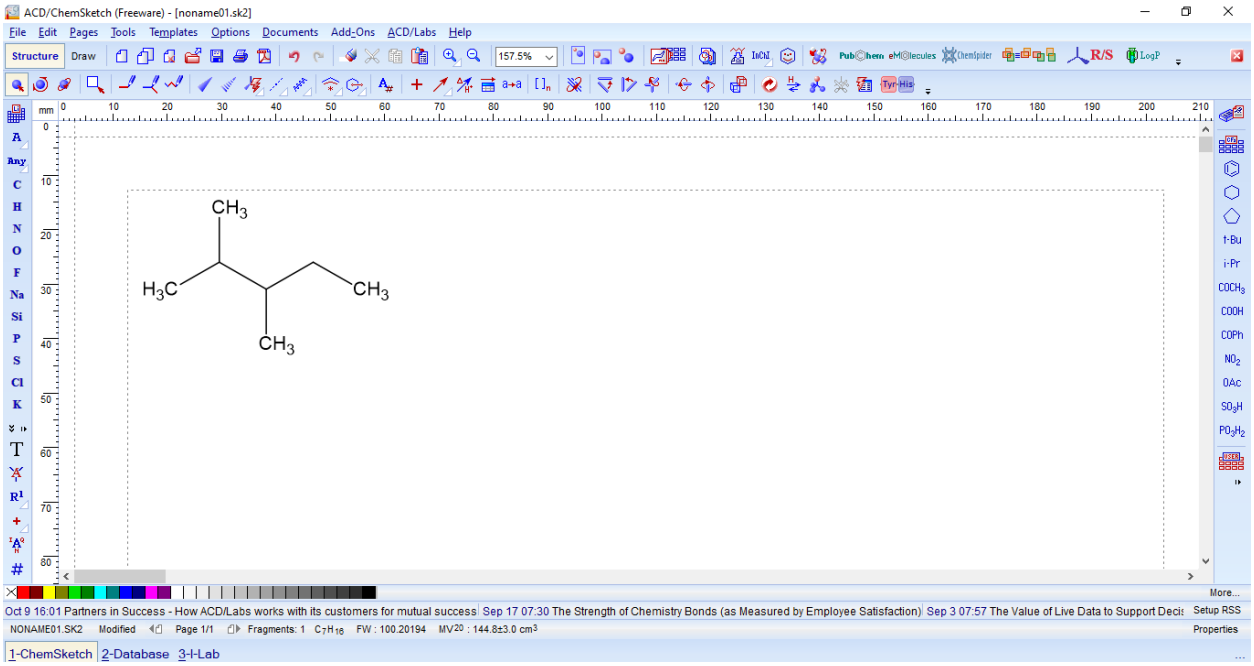
III.7. Aktifkan senyawa yang akan di clean up (muncul titik – titik kotak di sekitas struktur senyawa)



III.8. Klik Tools → Klik Clean Structure

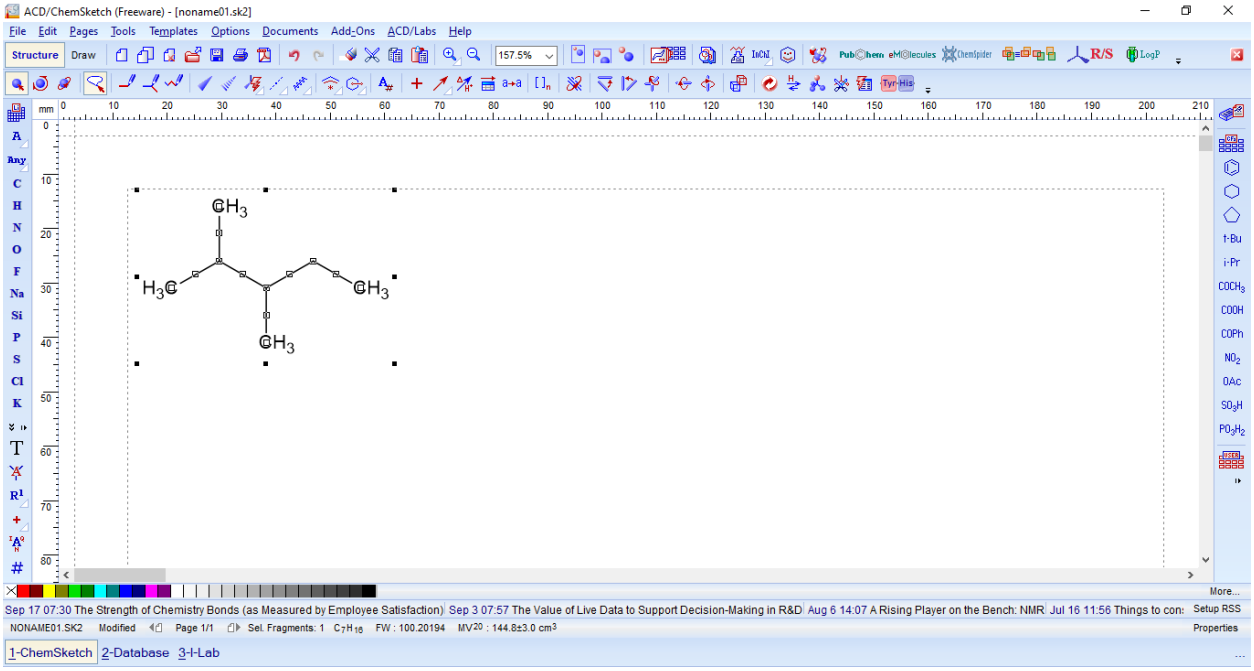


III.9. Struktur 2,3-dimetil propana yang sudah rapi

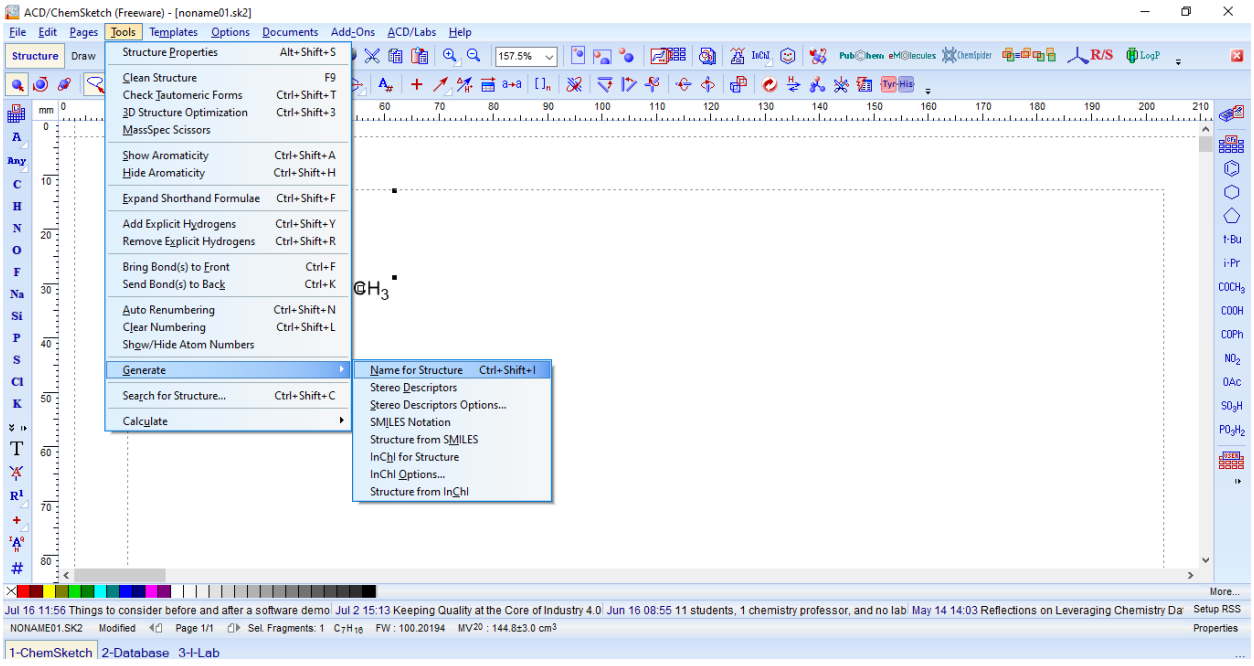


BAB IV. Cara Mengubah Struktur menjadi Nama Senyawa

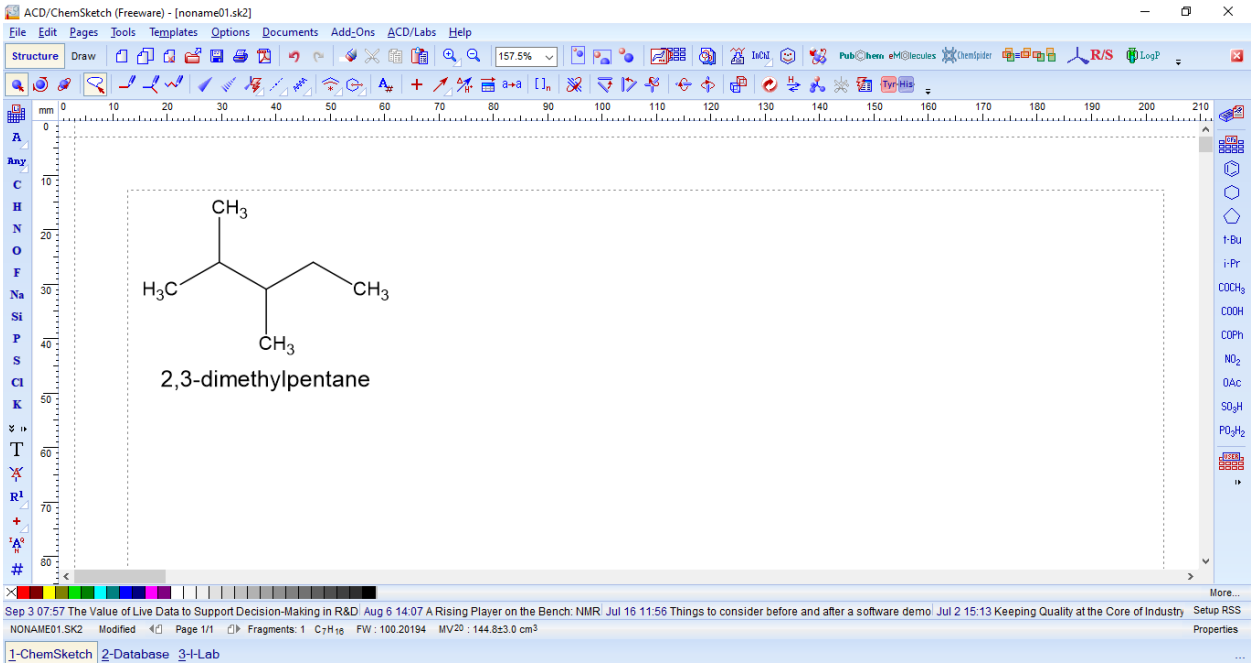
IV.1. Aktifkan Senyawa



IV.2. Klik Tools → Generate → Name for Structure

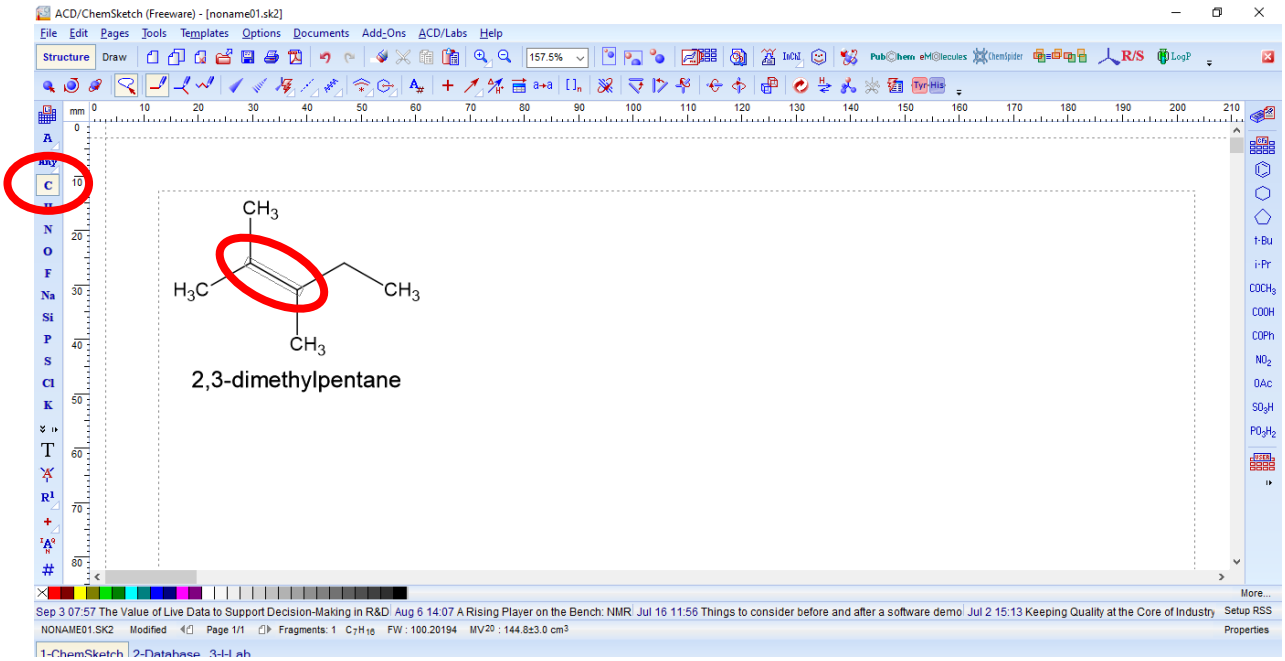


IV.3. Nama Senyawa akan muncul di bawah struktur

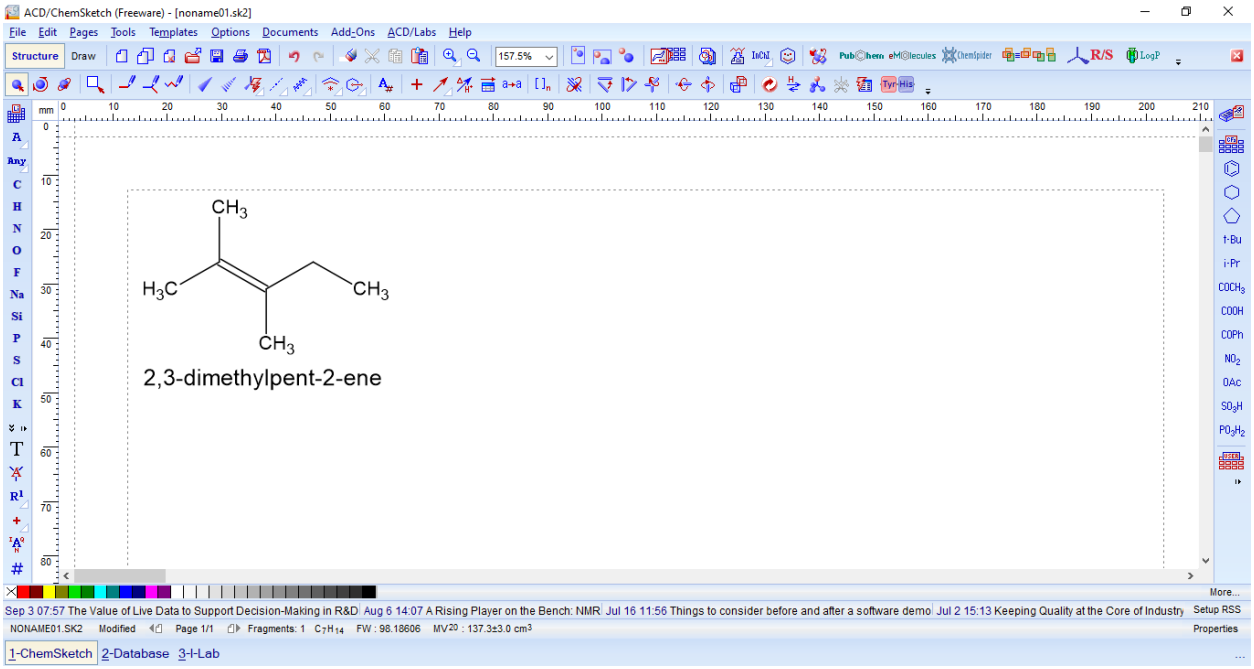


BAB V. Cara Membuat Ikatan Rangkap

V.1. Aktifkan atom C , Selanjutnya klik nomor ikatan yang dituju

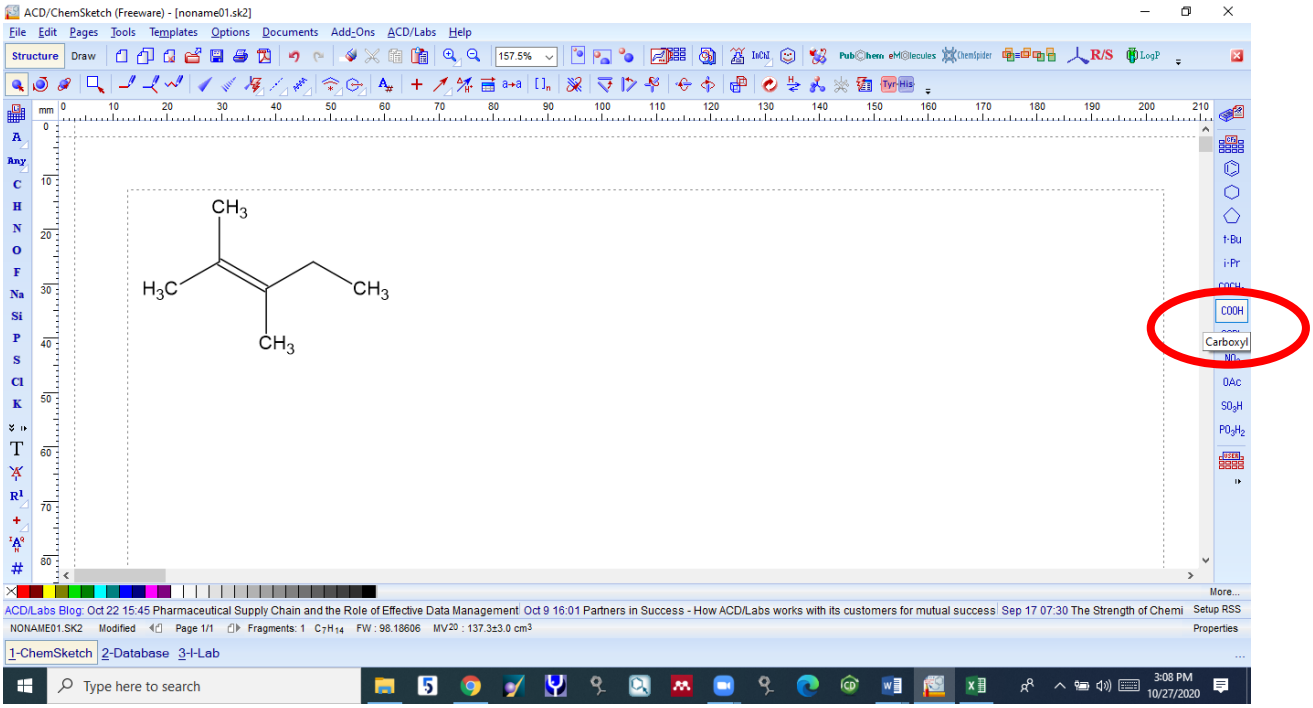


V.2. Struktur otomatis membentuk ikatan rangkap, 2,3-dimetil-2-pentena

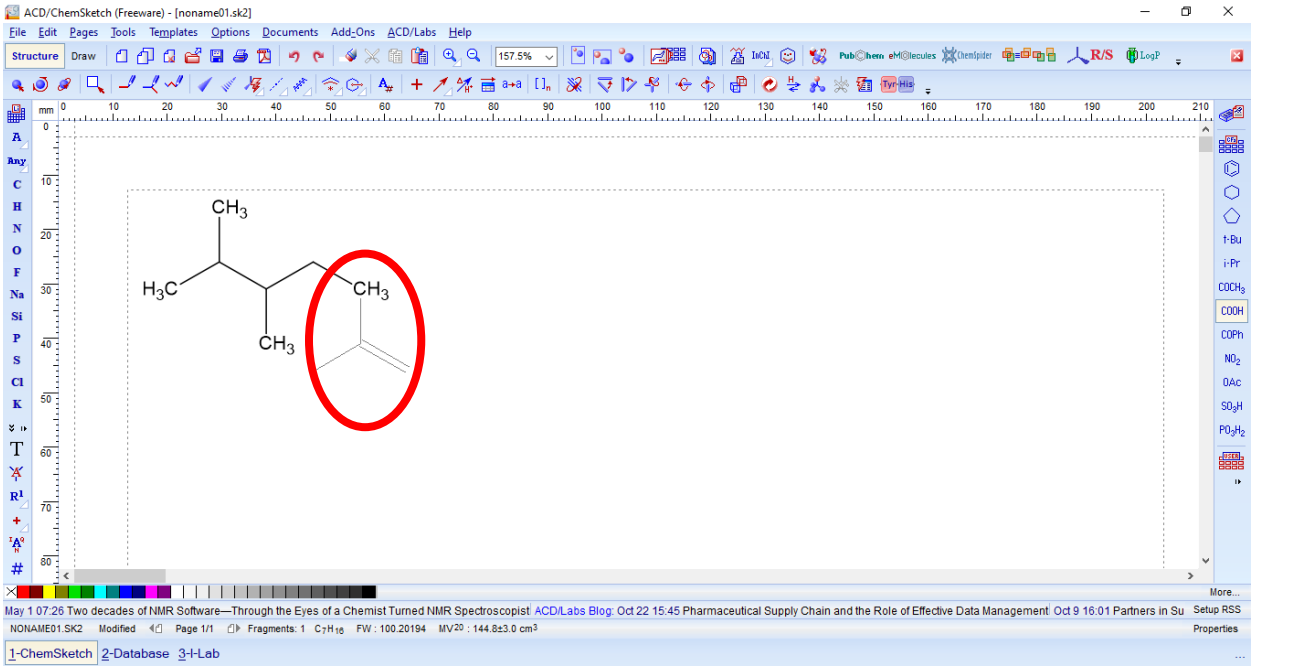


BAB VI. Menggambar Struktur dengan Gugus Fungsi

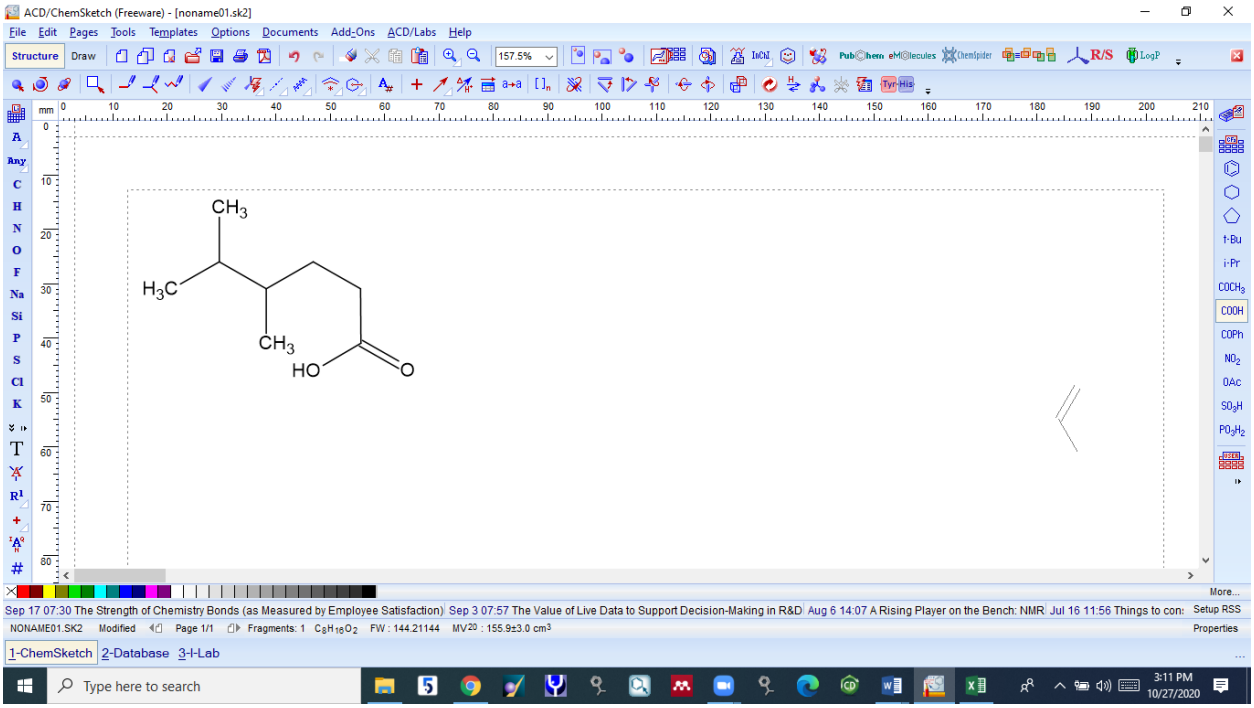
VI.1. Misal gugus fungsi karboksilat, caranya aktifkan template karboksil (COOH)



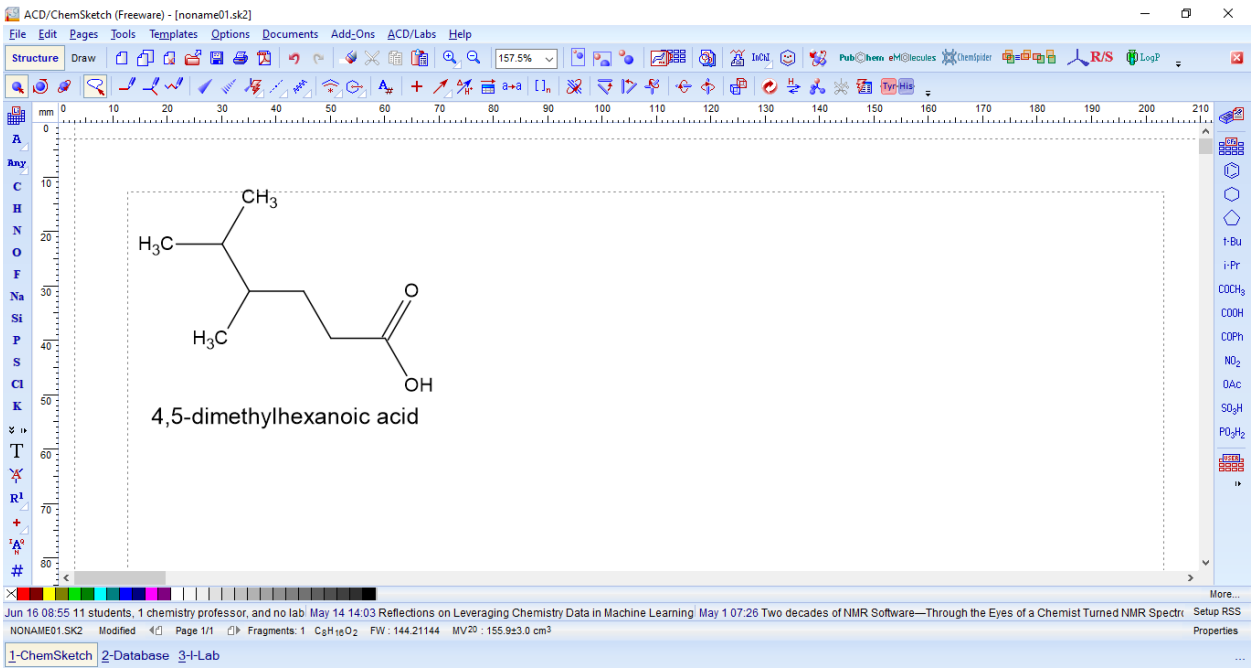
VI.2. Posisikan gugus fungsi pada atom C yang dituju



VI.3. Akan tampil gugus fungsi sebagai berikut

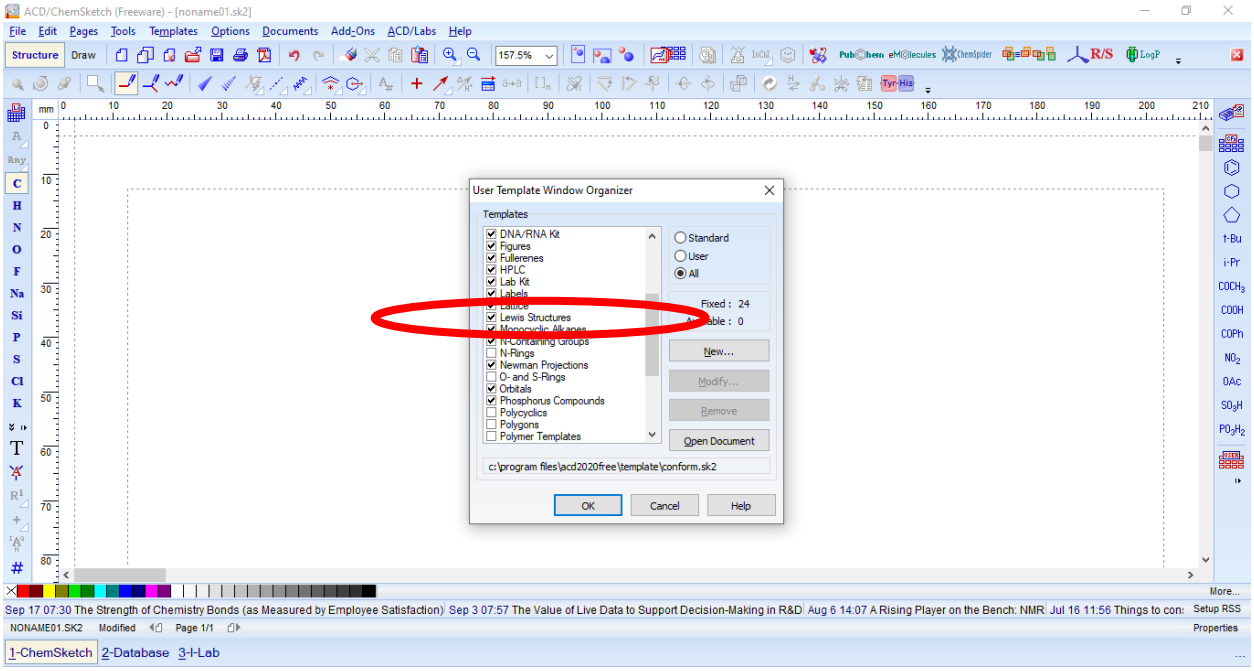


VI.4. Lakukan Clean Structure dan munculkan nama senyawa,
Setelah ditambahkan gugus fungsi senyawa yang terbentuk adalah Asam 4,5-dimetil heksanoat

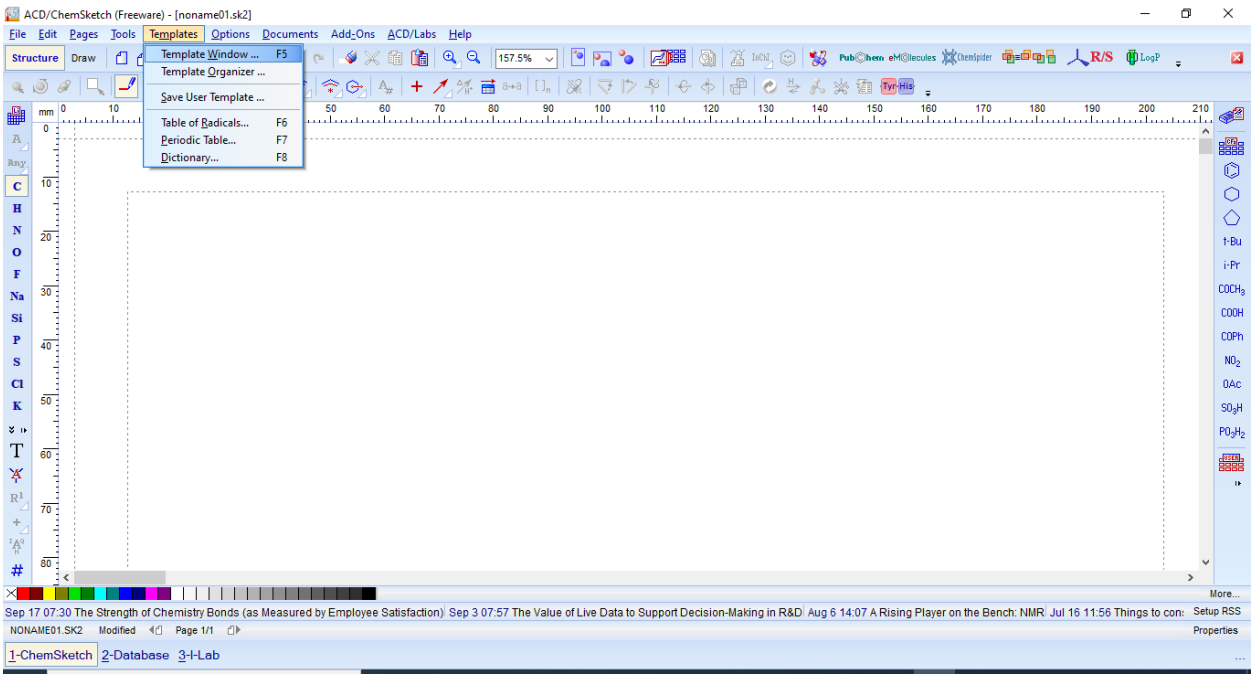


BAB VII. Cara Menggambar Struktur Lewis

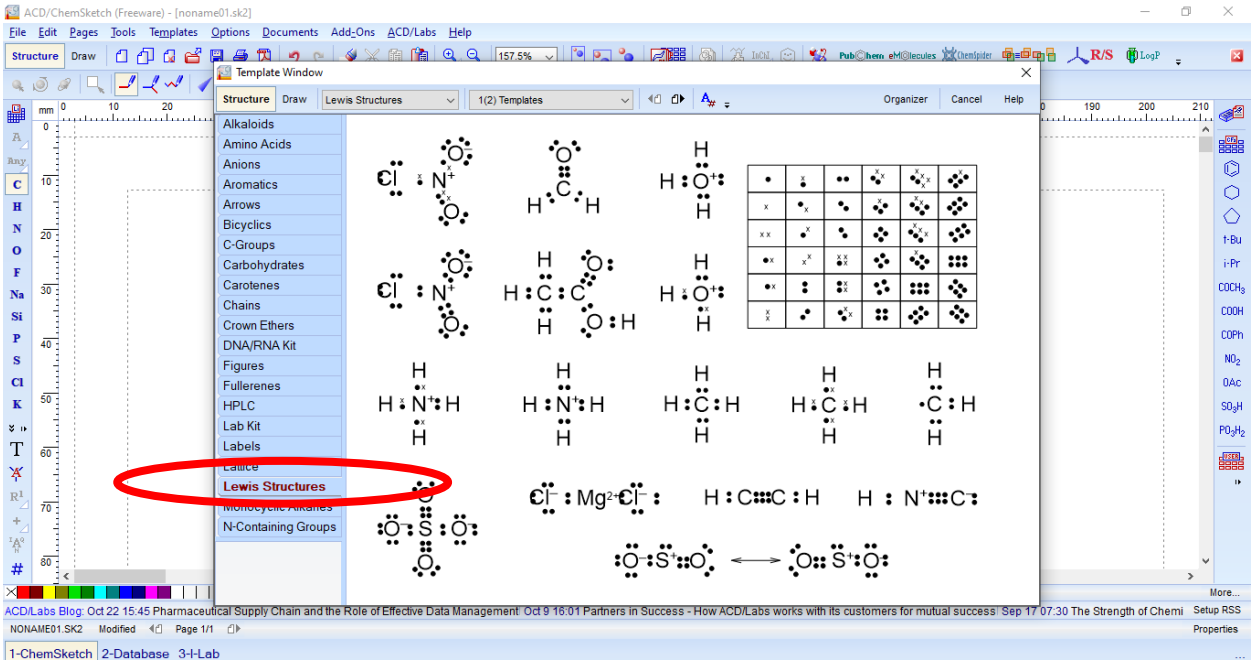
VII.1. Pastikan menu Lewis Structure sudah di checklist pada template window organizer



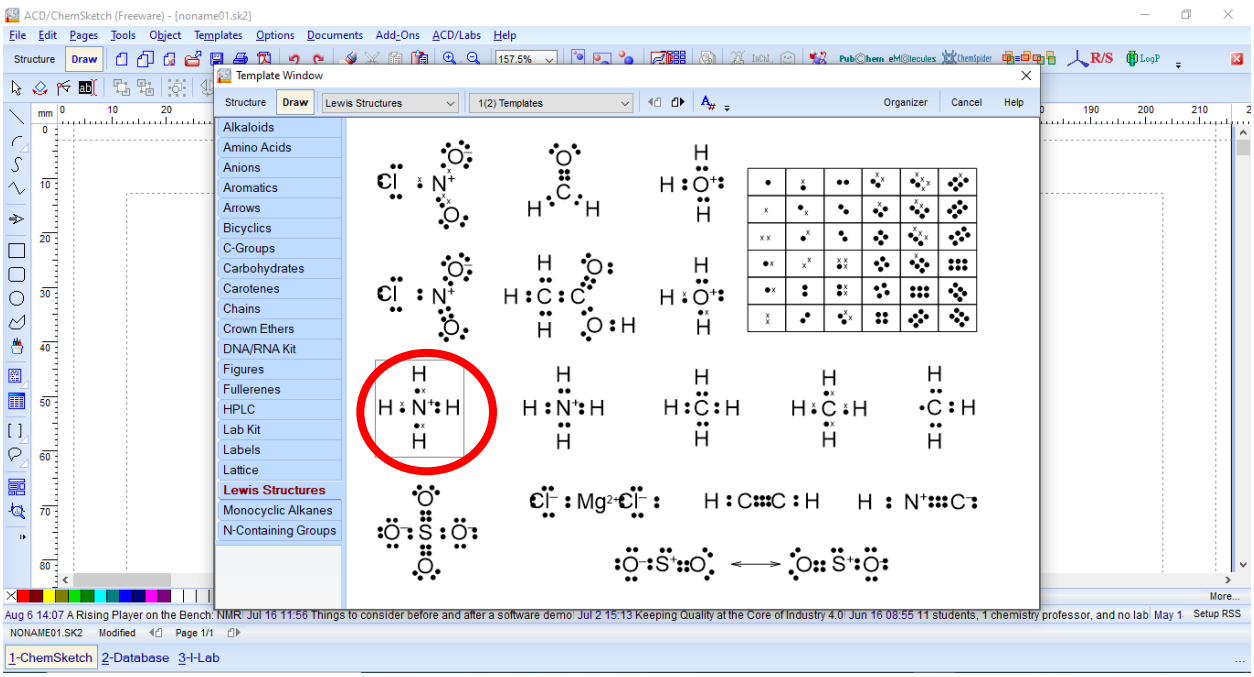
VII.2. Klik Template → Template Window



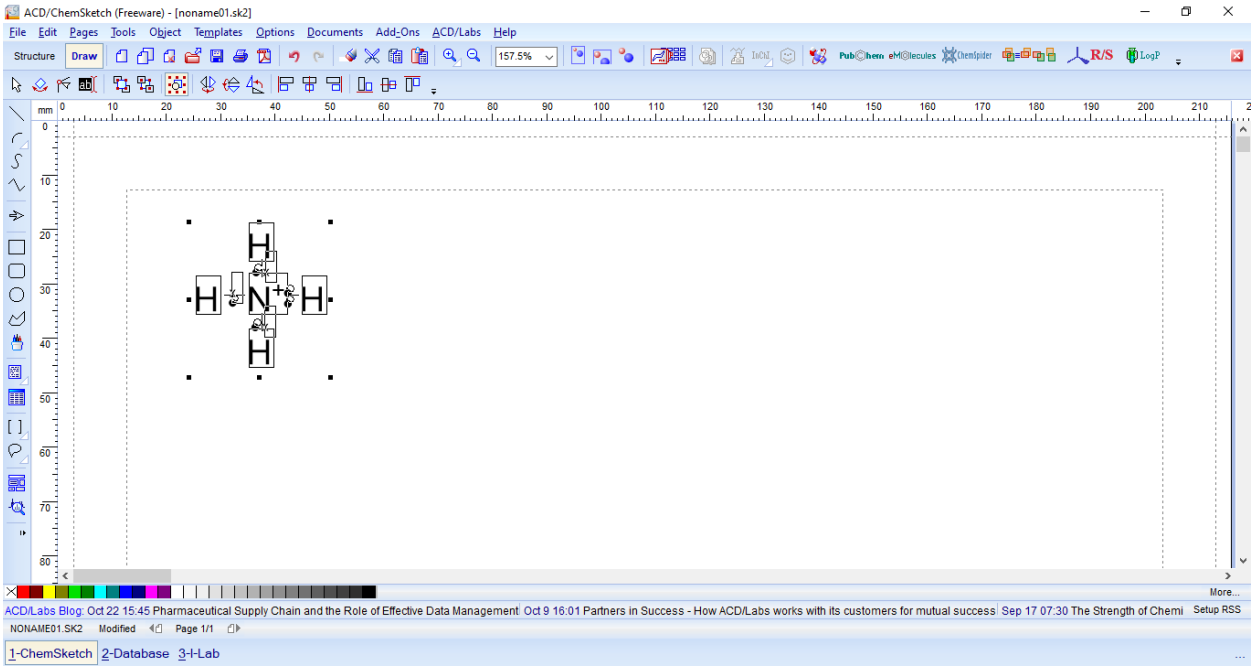
VII.3. Klik Lewis Structure

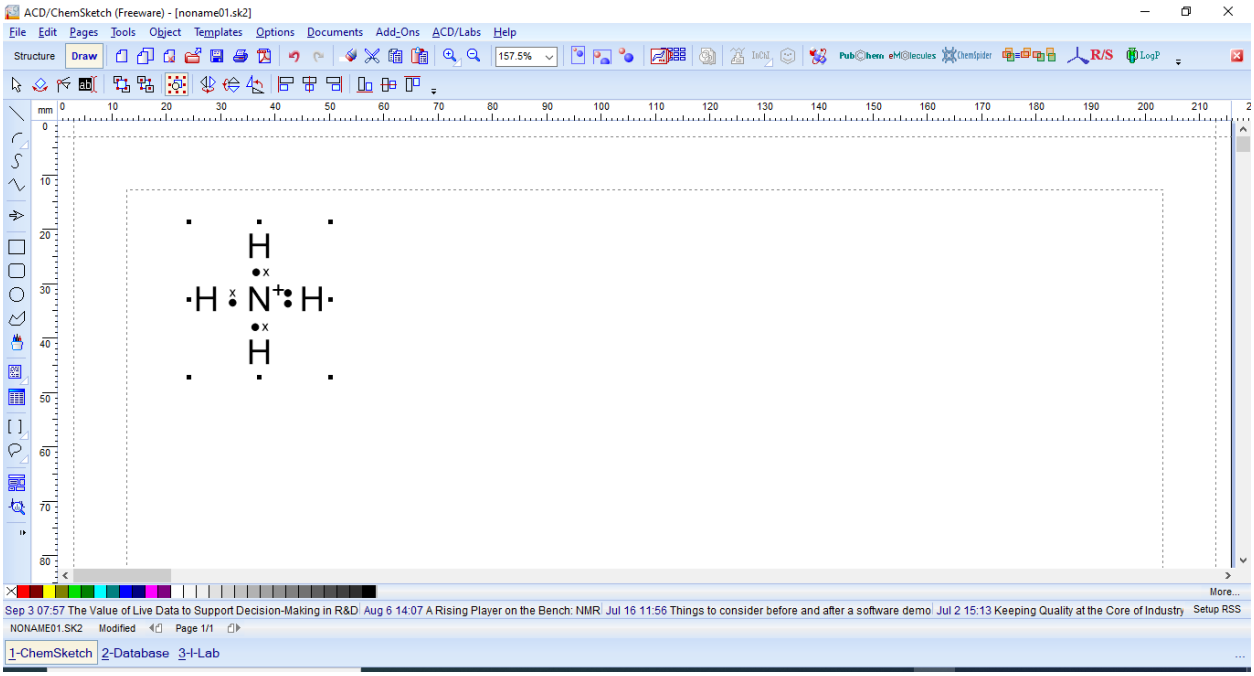


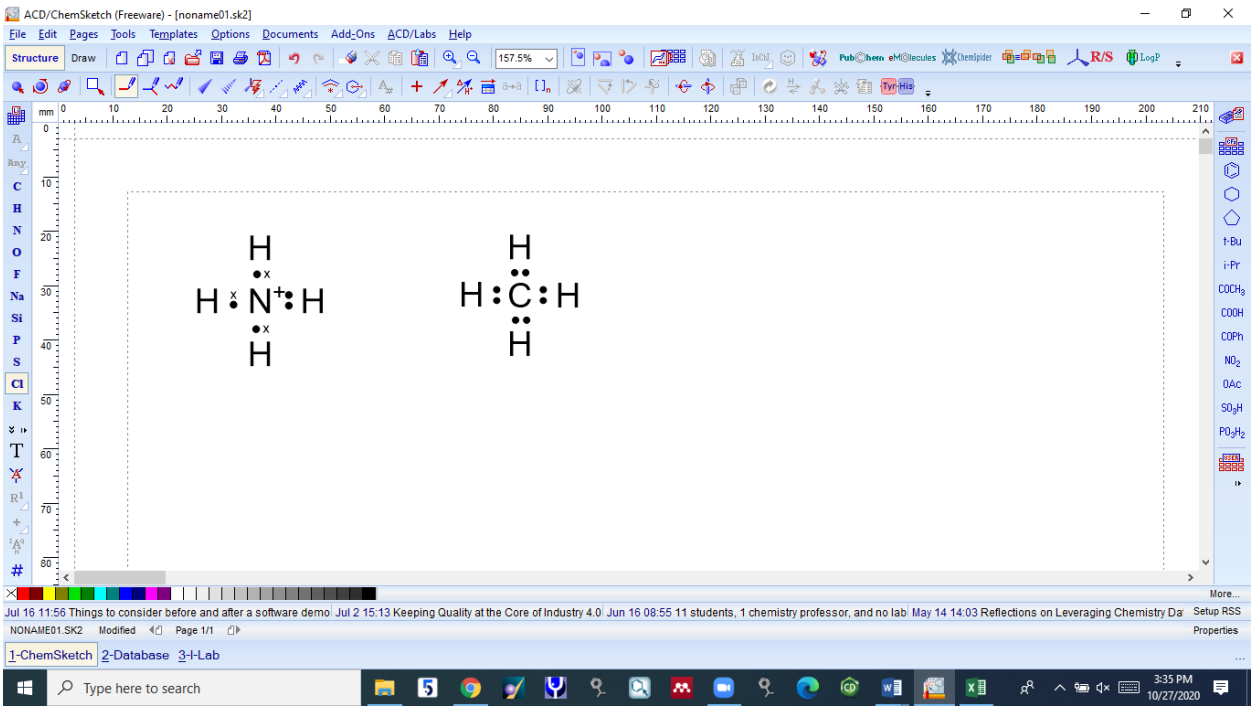
VII.4. Klik salah satu template yang dituju



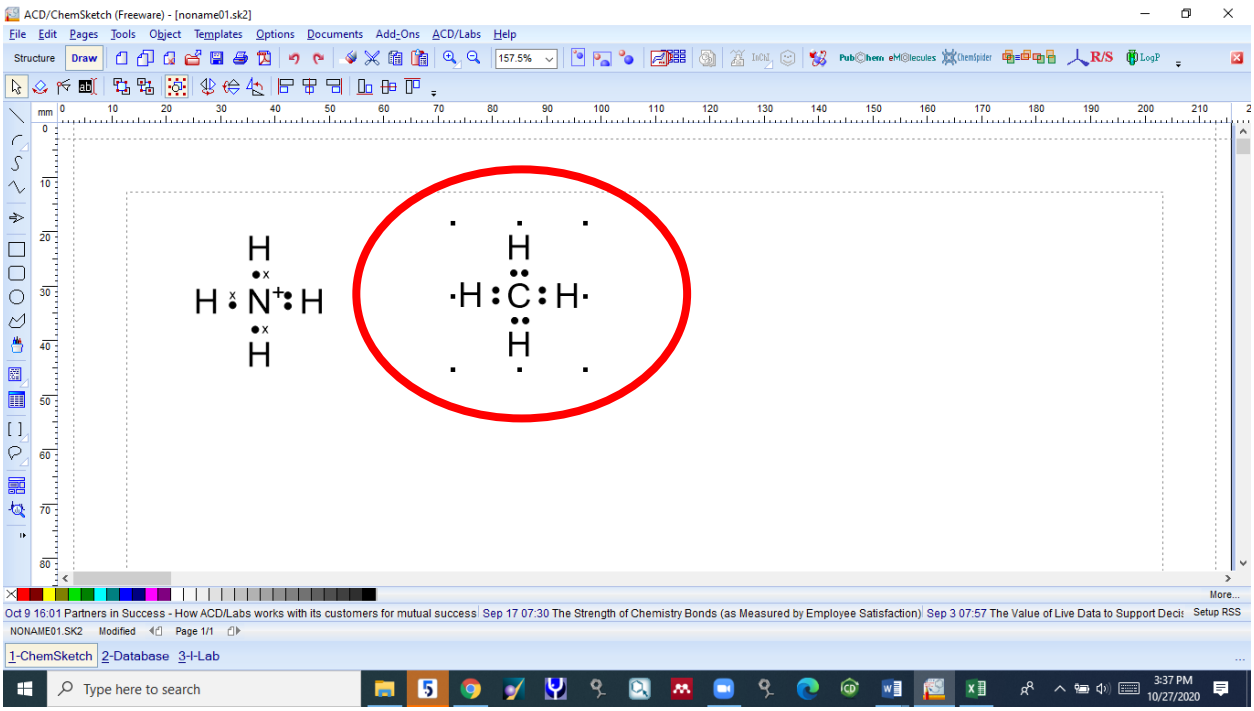
VII.5. Klik kan pada lembar kerja



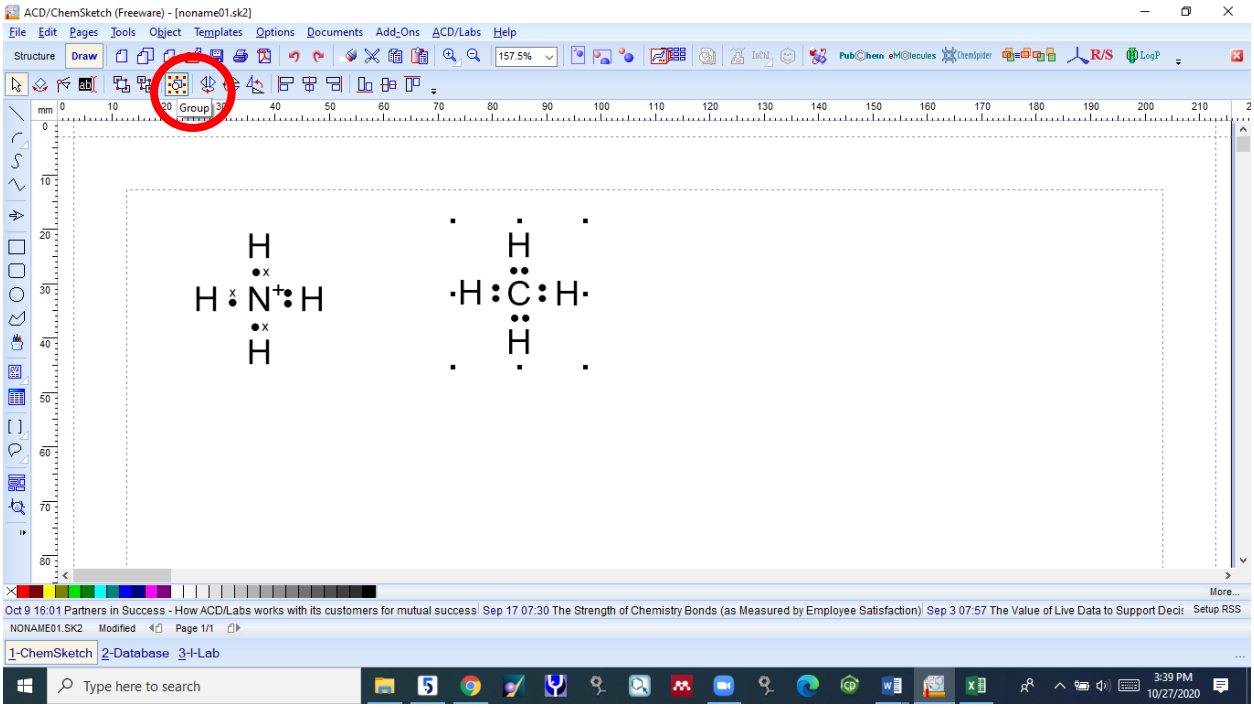




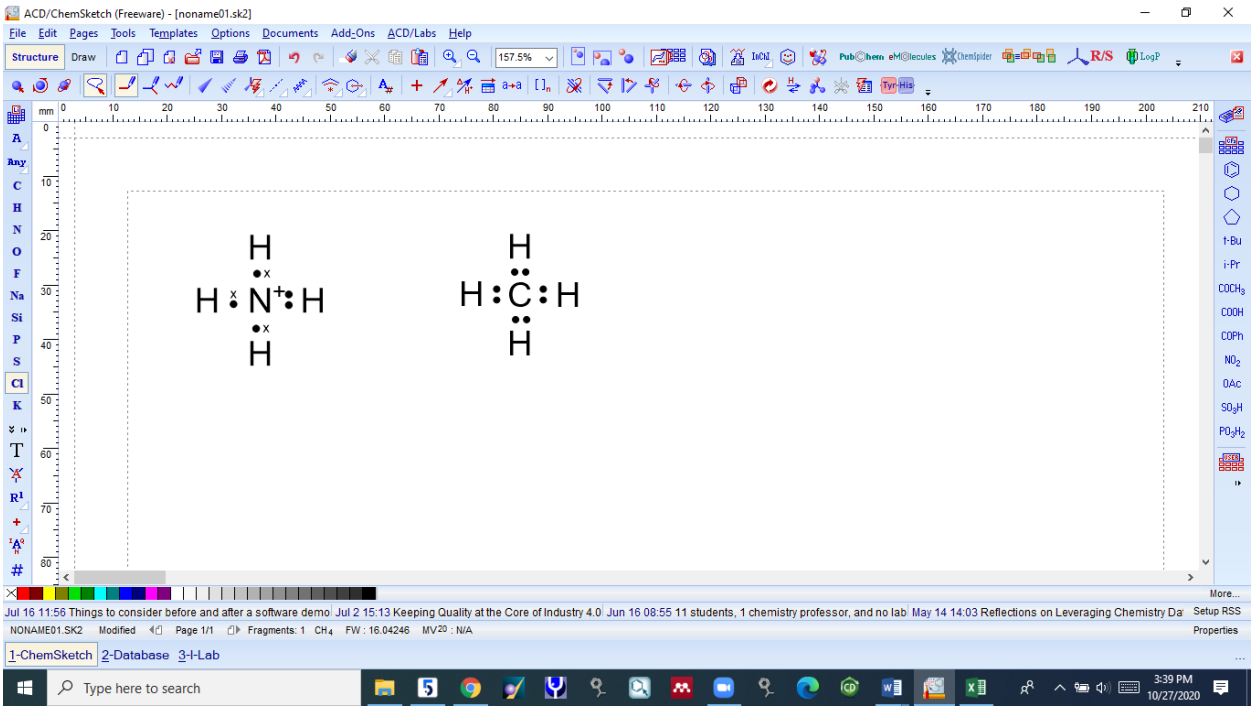
VII.6. Apabila ingin mengubah atom dalam struktur lewis, Lakukan ungroup terlebih dahulu dengan cara : aktifkan struktur



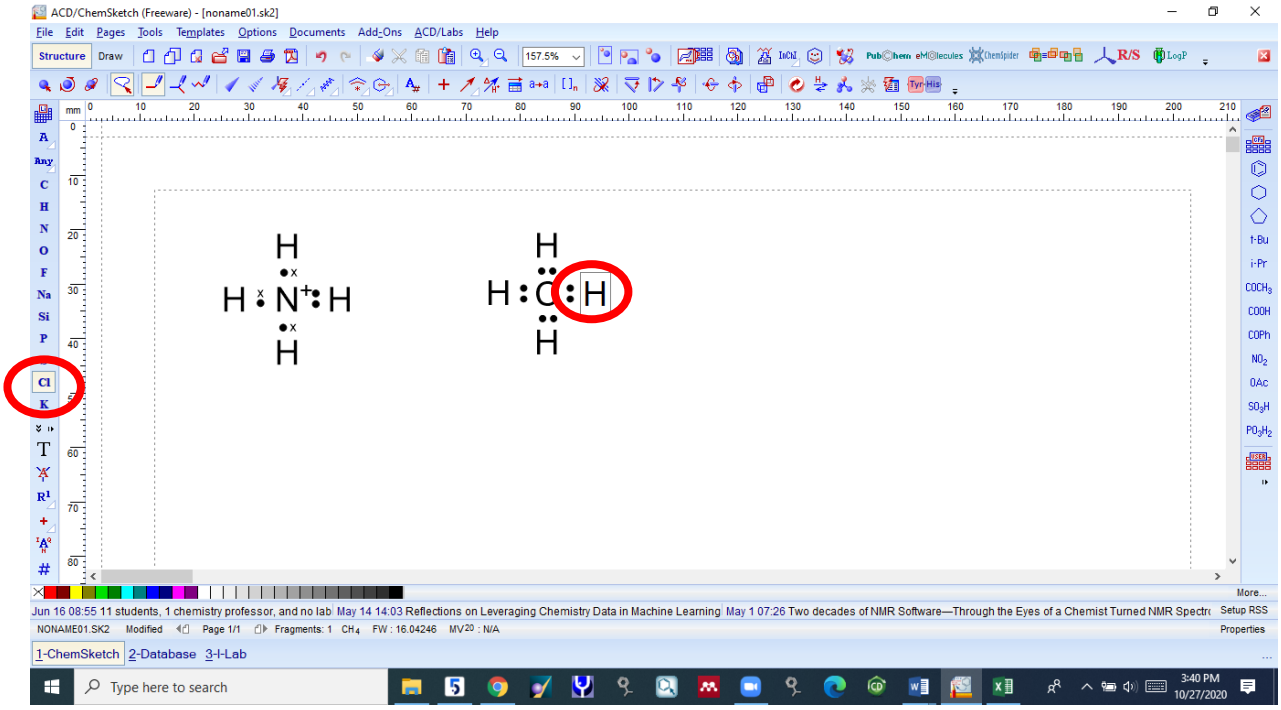
VII.7. Klik Group pada bagian Toolbar, Pastikan pada mode Draw



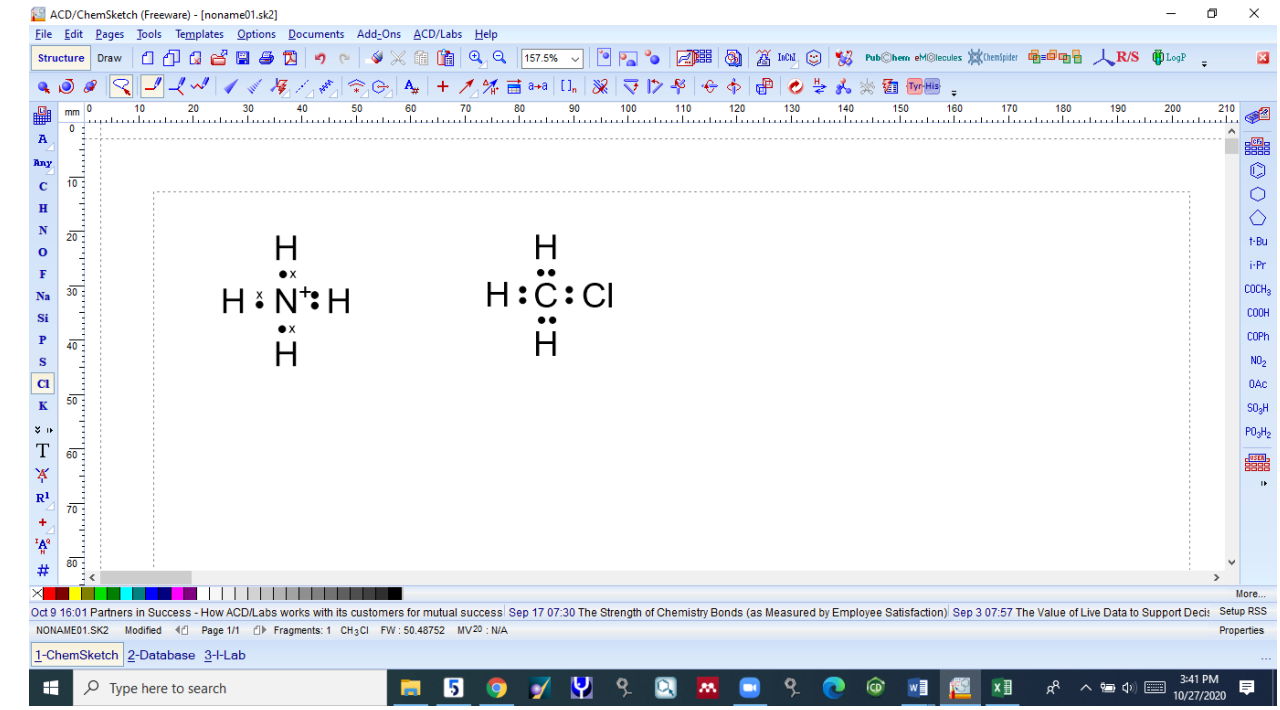
VII.8. Pindah ke Mode Structure



VII.9. Misal ingin mengubah atom H pada CH4 dengan Cl maka aktifkan atom Cl , Klik bagian atom H yang ingin diganti

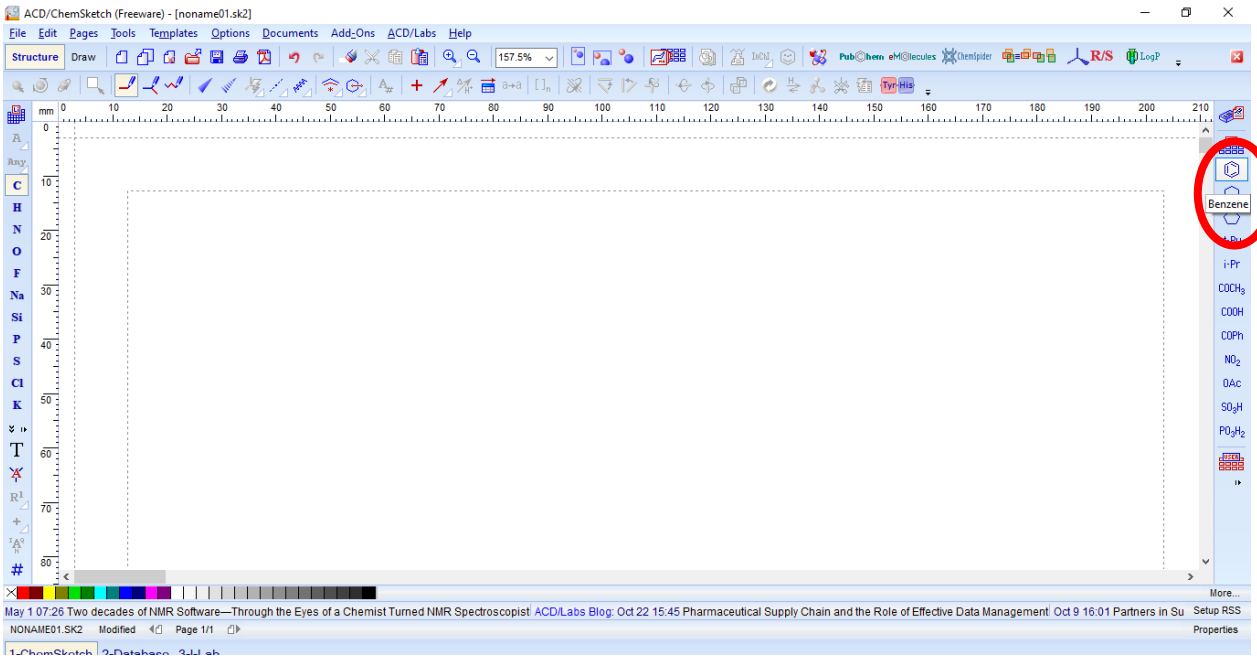


VII.10. Struktur Lewis CH4 sudah berubah menjadi CH3Cl

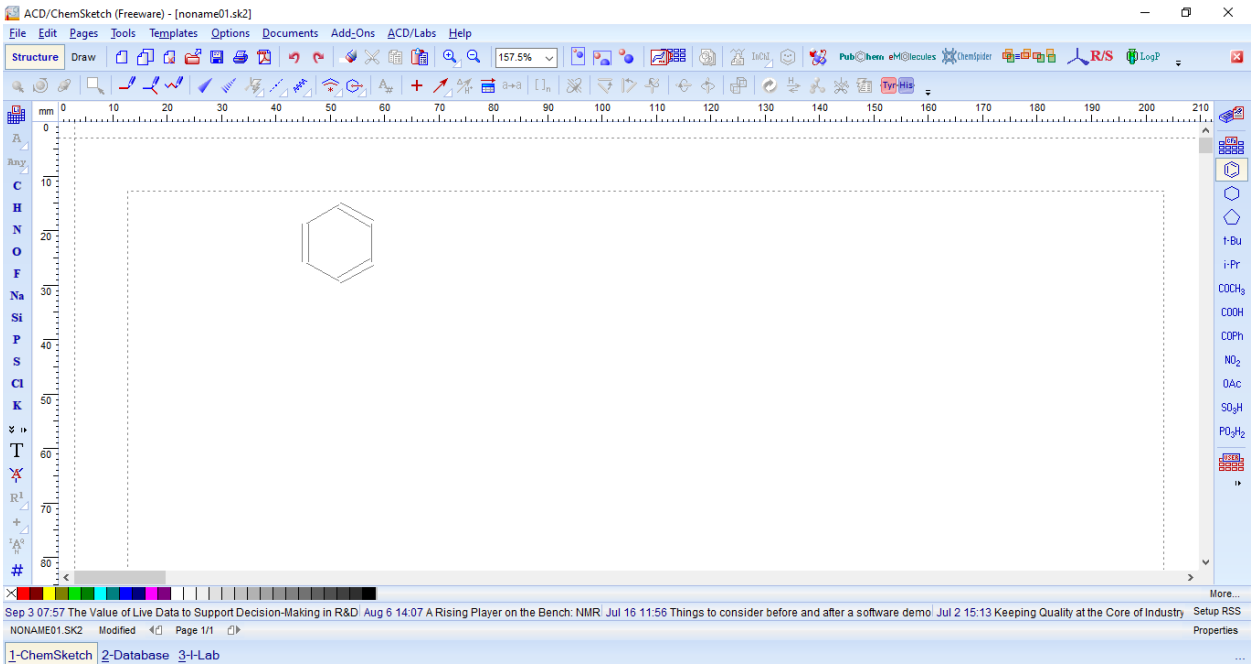


BAB VIII. Menggambar Struktur Senyawa Siklik

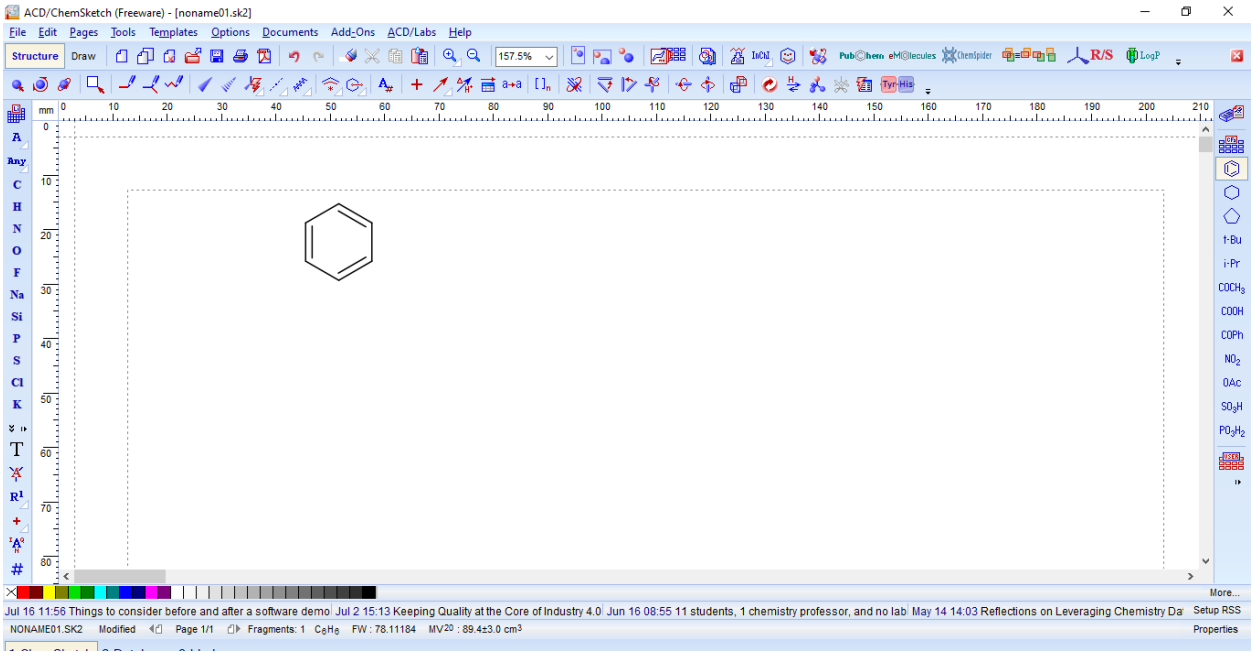
VIII.1. Aktifkan template senyawa siklik



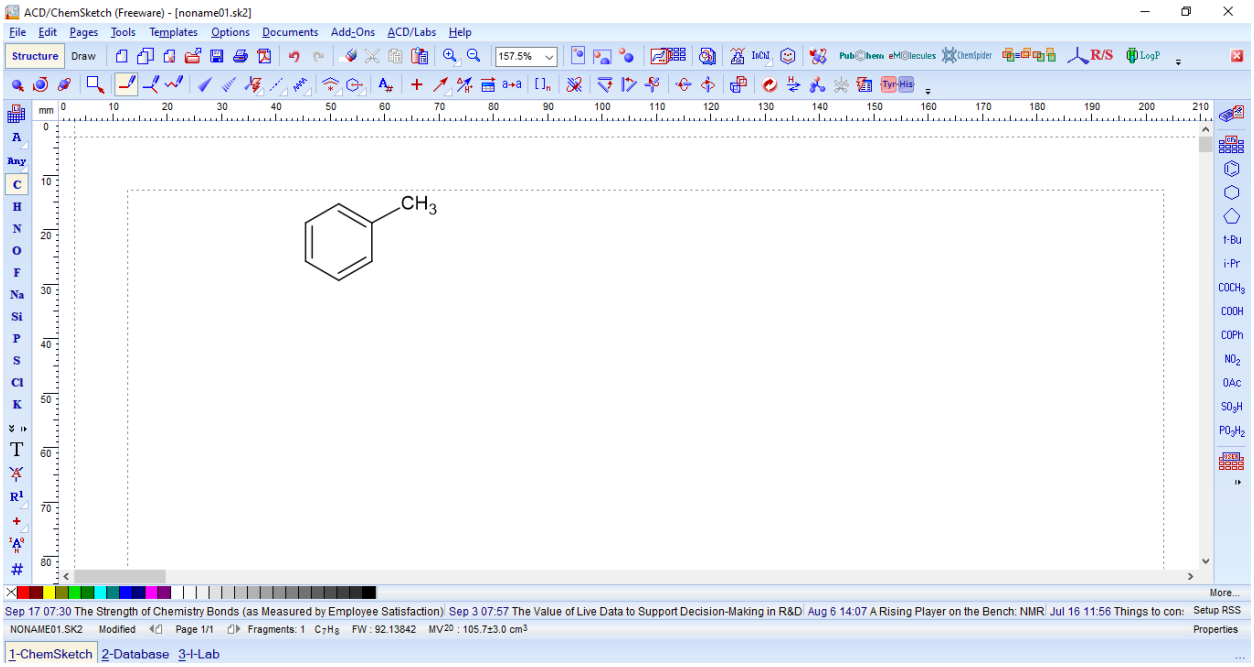
VIII.2. Klik pada lembar kerja

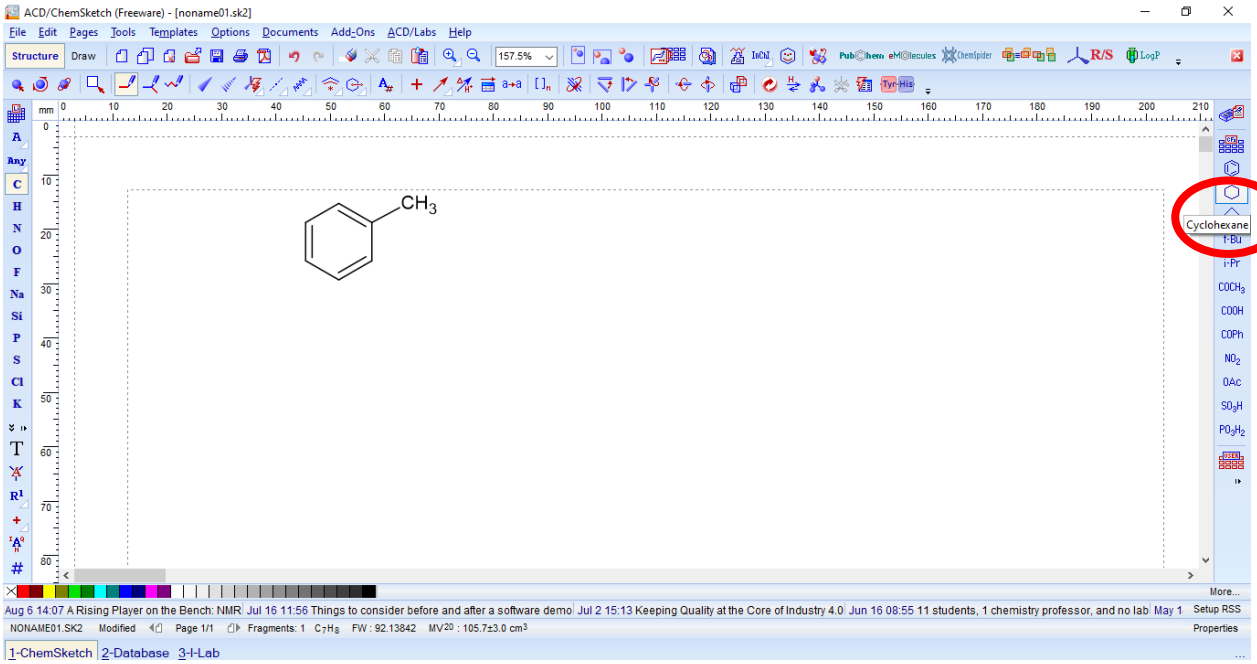


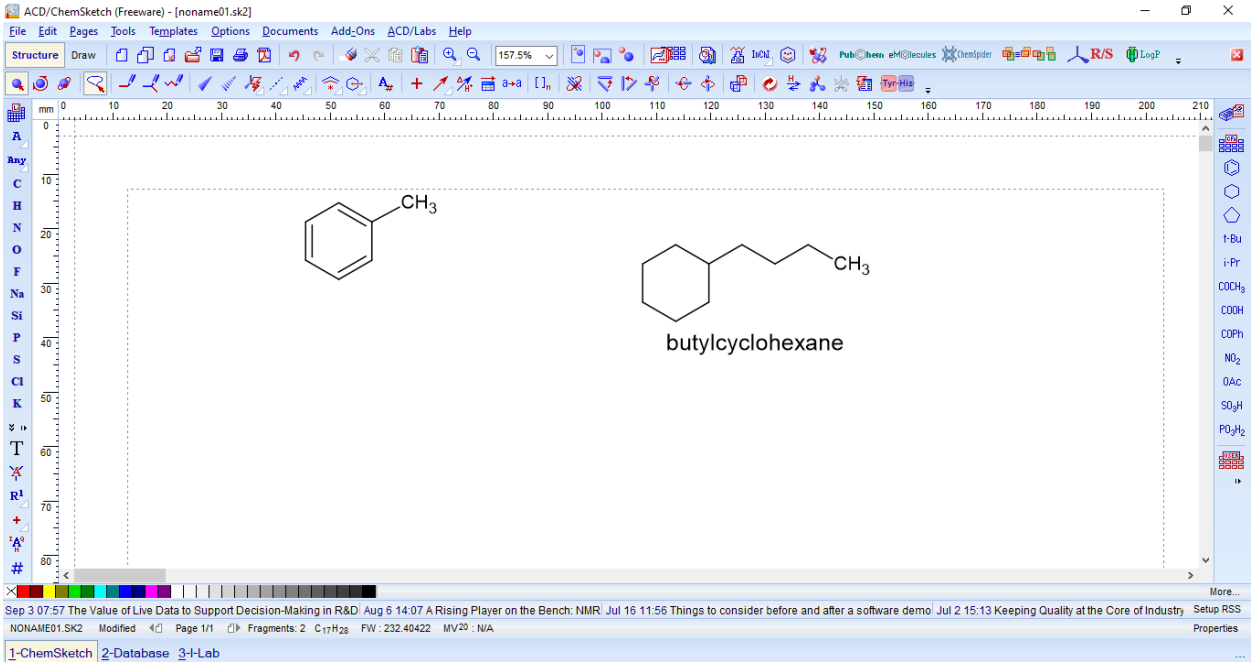
VIII.3. Tampilan benzene pada lembar kerja



VIII.4. Untuk menambahkan rantai samping, klik kan atom pada bagian atom yang akan diberi cabang

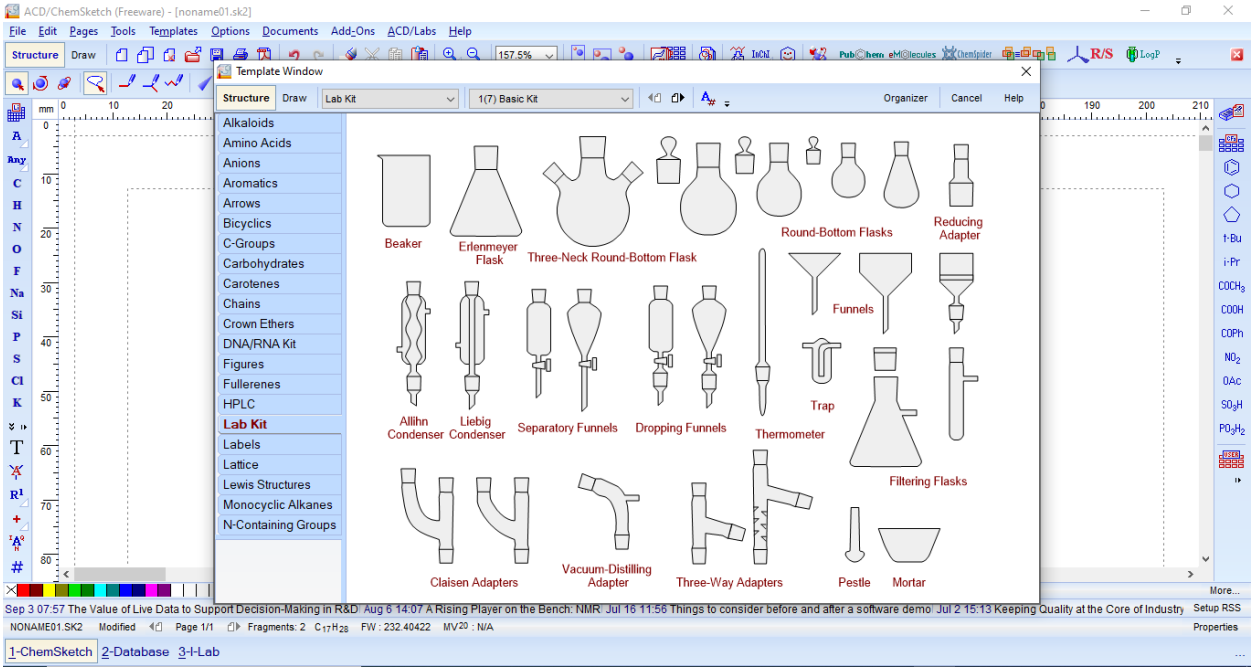


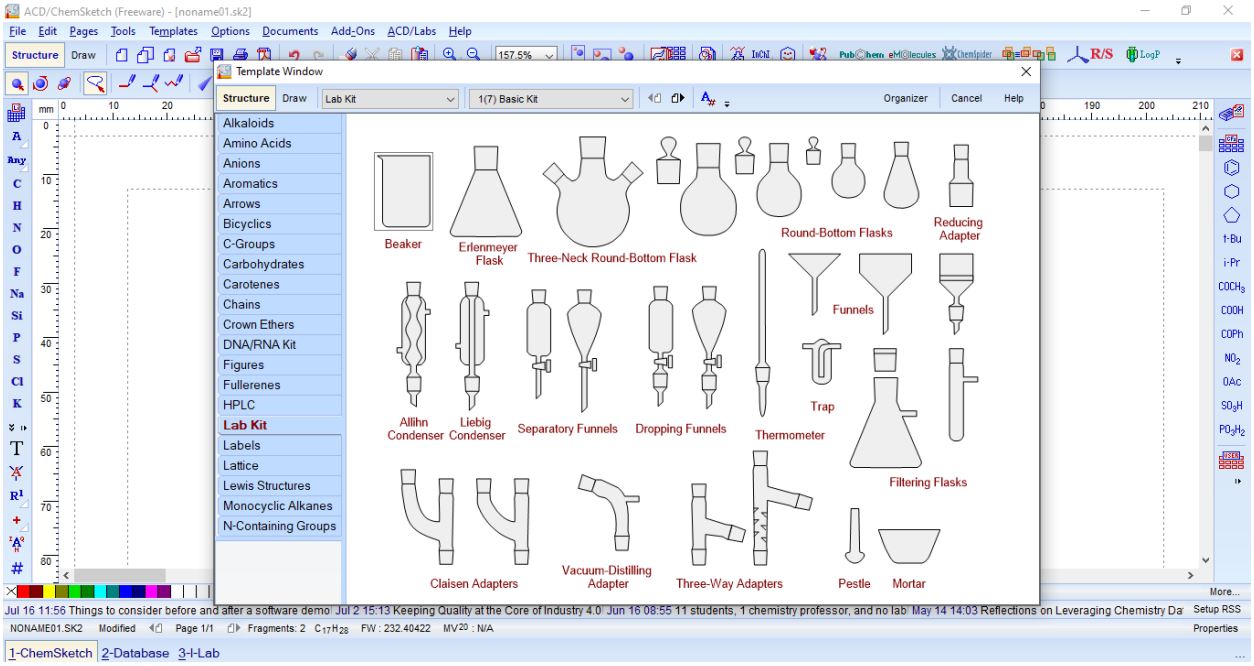

ACD/ChemSketch (Freeware) - [noname01.sk2]
File Edit Pages Tools Templates Options Documents Add-Ons ACD/Labs Help
Structure Draw
157.5%
CH3
Cyclohexane
t-Bu
i-Pr
COCH3
COOH
COPh
NO2
OAc
SO3H
PO3H2
More...
Aug 6 14:07 A Rising Player on the Bench: NMR Jul 16 11:56 Things to consider before and after a software demo Jul 2 15:13 Keeping Quality at the Core of Industry 4.0 Jun 16 08:55 11 students, 1 chemistry professor, and no lab May 1
Setup RSS
NONAME01.SK2 Modified Page 1/1 Fragments: 1 C7H8 FW : 92.13842 MV20 : 105.7±3.0 cm3
Properties
1-ChemSketch 2-Database 3-I-Lab

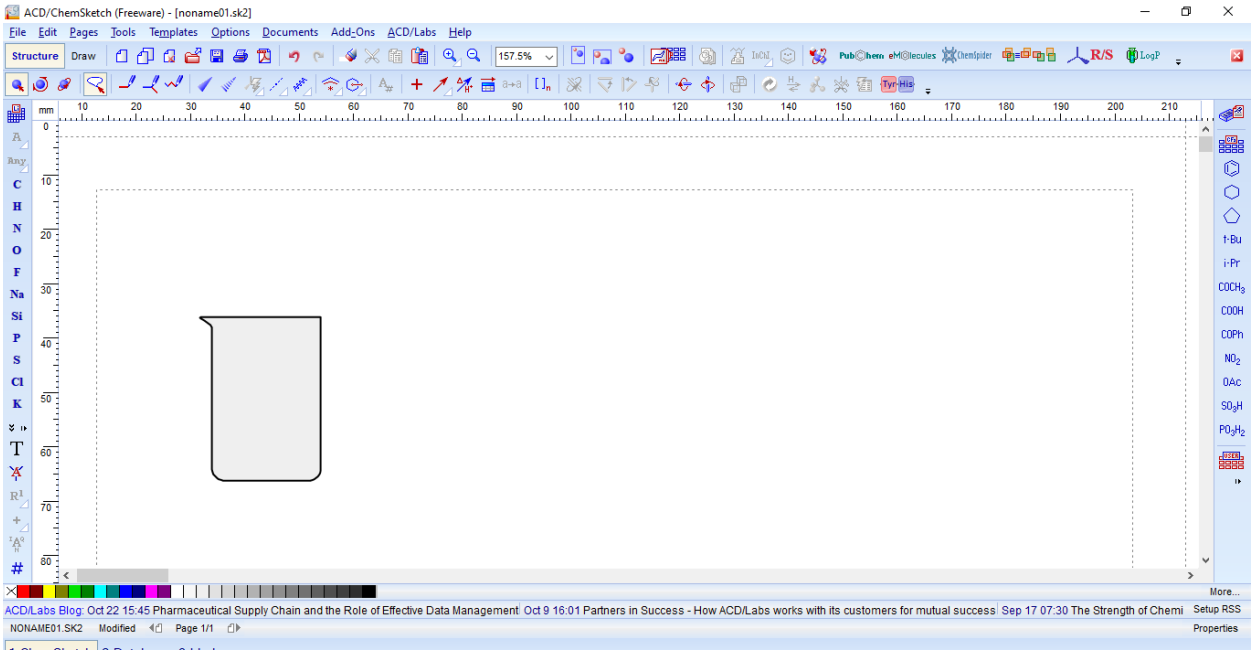

ACD/ChemSketch (Freeware) - [noname01.sk2]
File Edit Pages Tools Templates Options Documents Add-Ons ACD/Labs Help
Structure Draw
157.5%
CH3
CH3
butylcyclohexane
t-Bu
i-Pr
COCH3
COOH
COPh
NO2
OAc
SO3H
PO3H2
More...
Sep 3 07:57 The Value of Live Data to Support Decision-Making in R&D Aug 6 14:07 A Rising Player on the Bench: NMR Jul 16 11:56 Things to consider before and after a software demo Jul 2 15:13 Keeping Quality at the Core of Industry
Setup RSS
NONAME01.SK2 Modified Page 1/1 Fragments: 2 C17H28 FW : 232.40422 MV20 : N/A
Properties
1-ChemSketch 2-Database 3-I-Lab

BAB IX. Menggambar Peralatan Laboratorium

IX.1. Klik Template → Klik Template Window → Klik Lab Kit



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File Edit Pages Tools Templates Options Documents Add-Ons ACD/Labs Help
Structure Draw
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ACD/Labs Blog: Oct 22 15:45 Pharmaceutical Supply Chain and the Role of Effective Data Management Oct 9 16:01 Partners in Success - How ACD/Labs works with its customers for mutual success Sep 17 07:30 The Strength of Chemi
NONAME01.SK2 Modified Page 1/1
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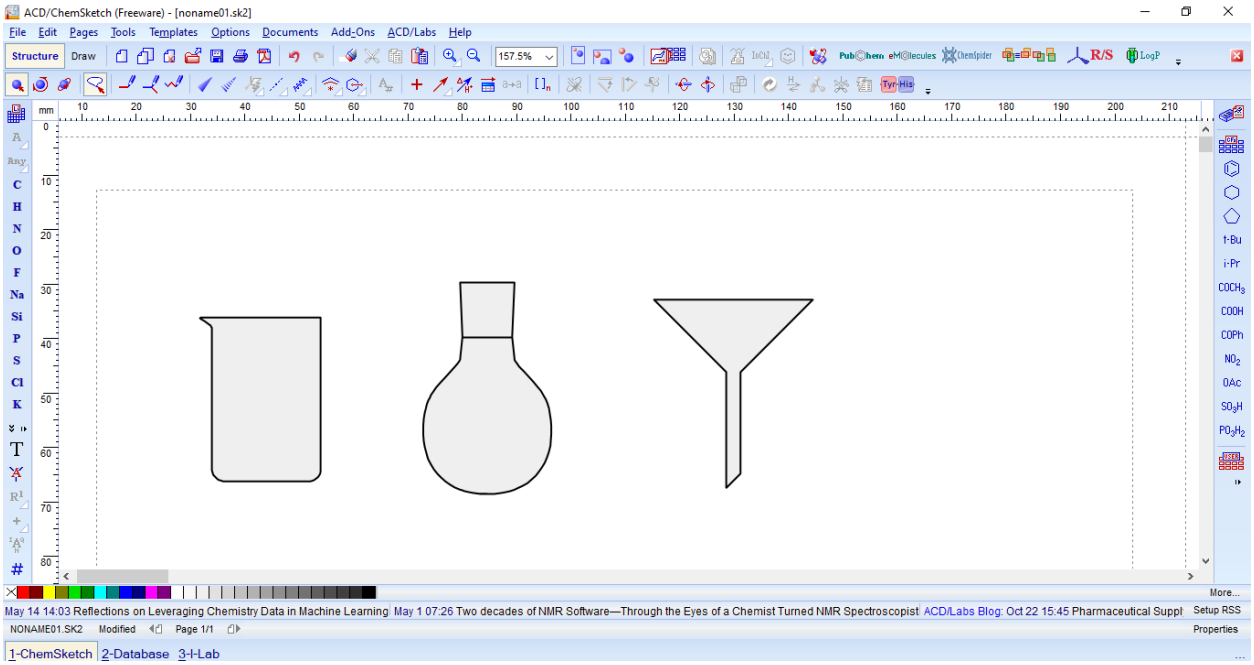
Properties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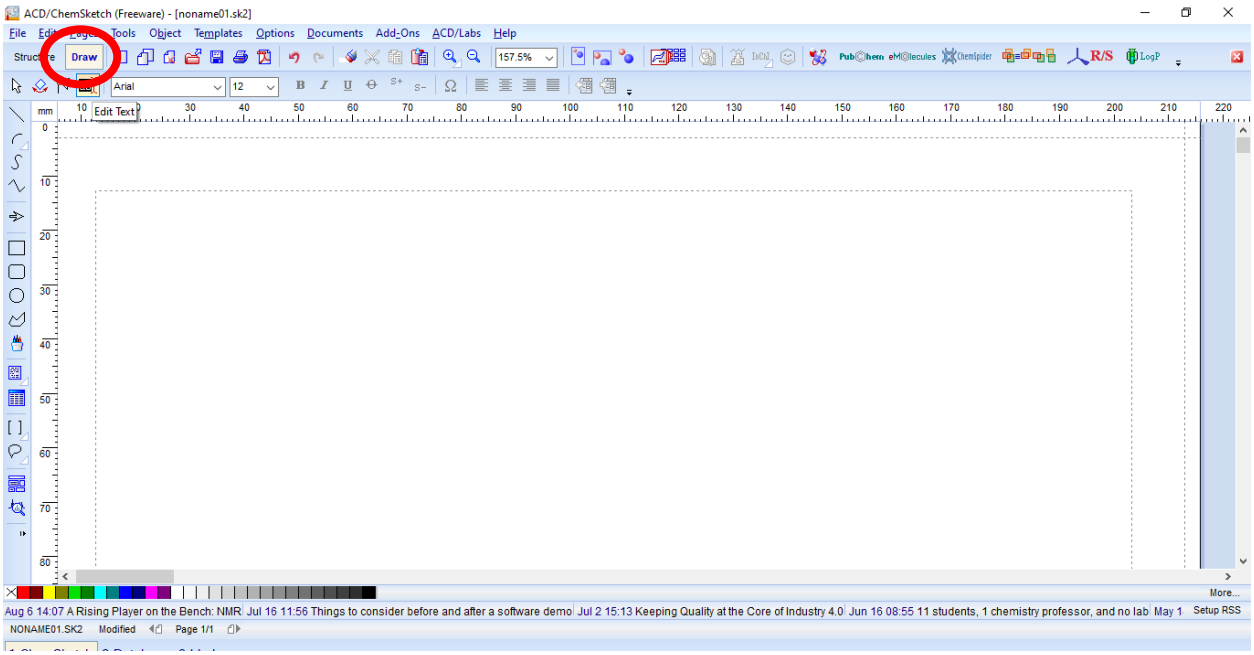
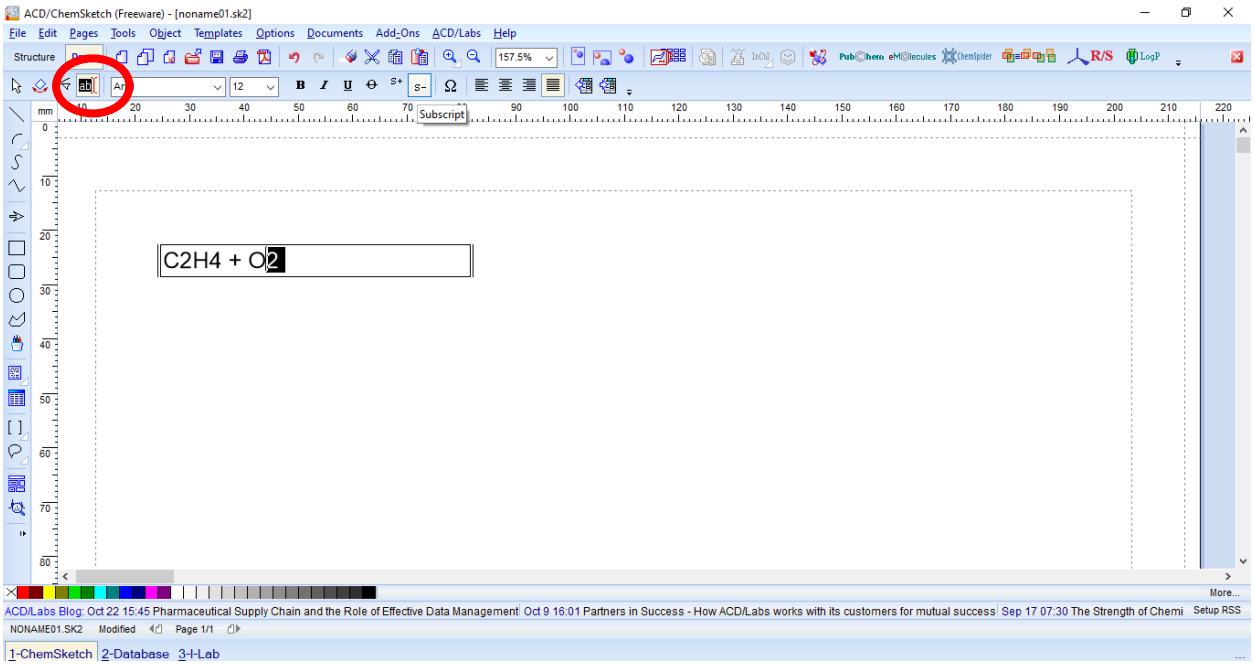
1-ChemSketch 2-Database 3-I-Lab

BAB X. Menggambar Persamaan Reaksi

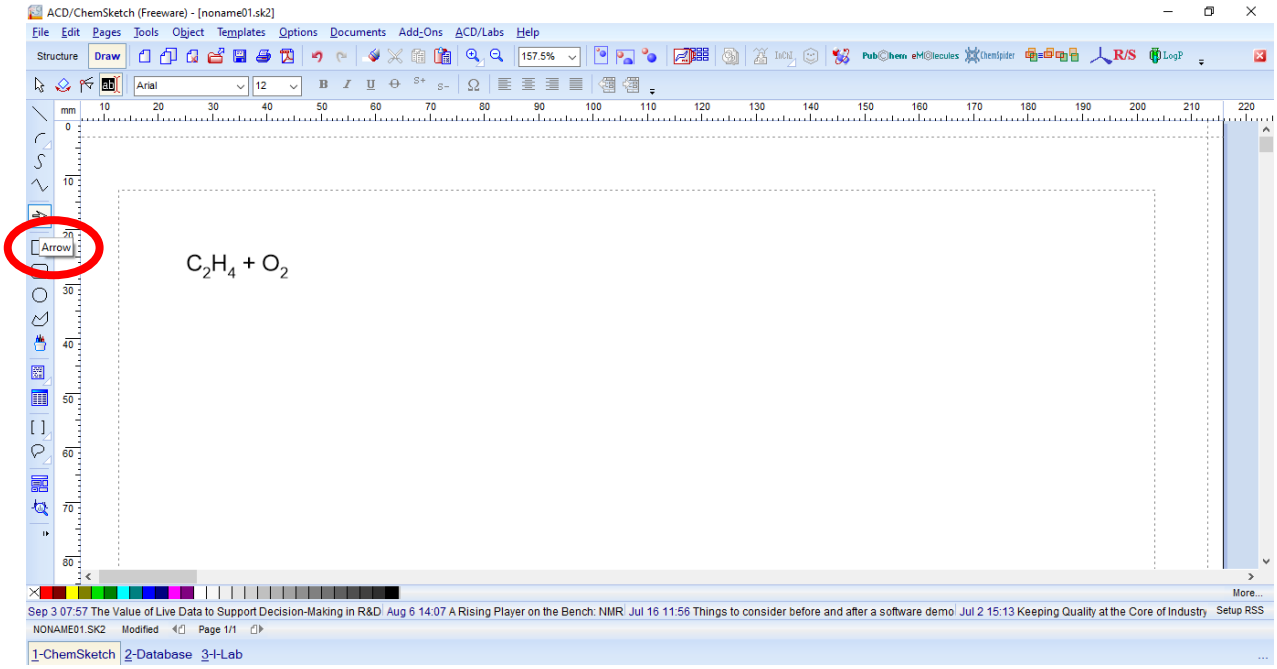
X.1. Lembar kerja dalam mode Draw



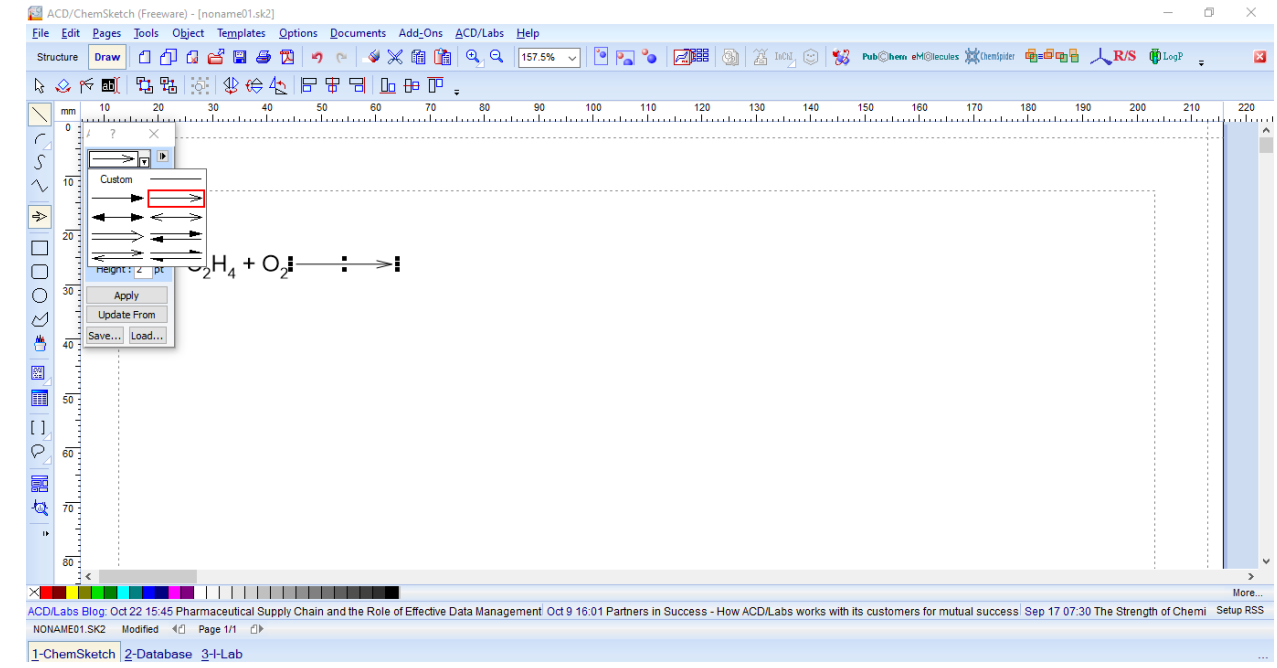
X.2. Aktifkan edit text , Klik kan di lembar kerja dan ketik rumus molekul reaksi



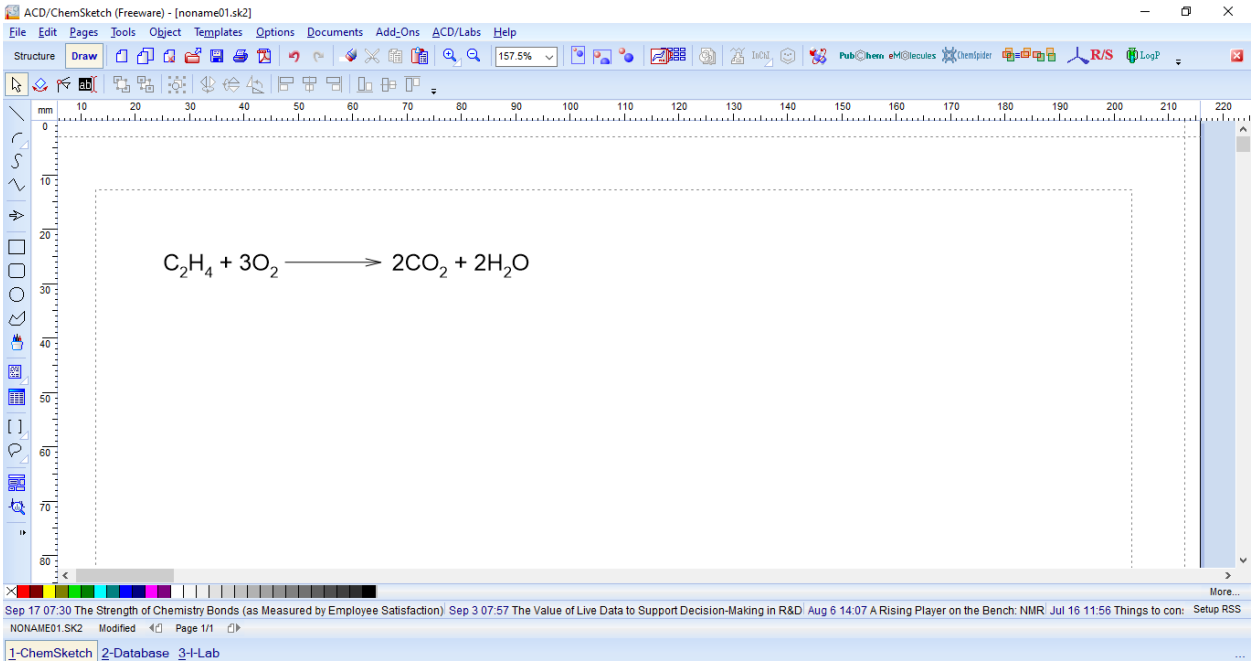
X.3. Klik Arrow untuk menggambar panah reaksi



X.4. Begitu kita klik dalam Lembar kerja, akan muncul berbagai bentuk panah reaksi, Pilih salah satu

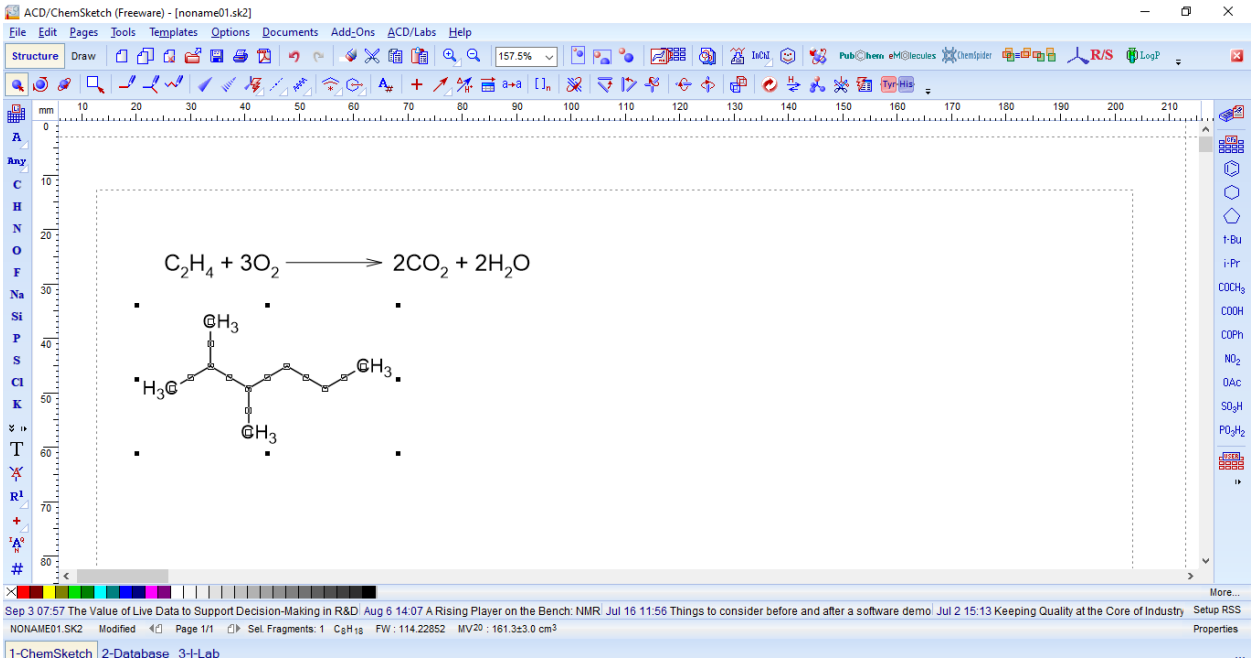


X.5. Klik lagi edit text dan lanjutkan menulis produk dari reaksi dan menyetarakan

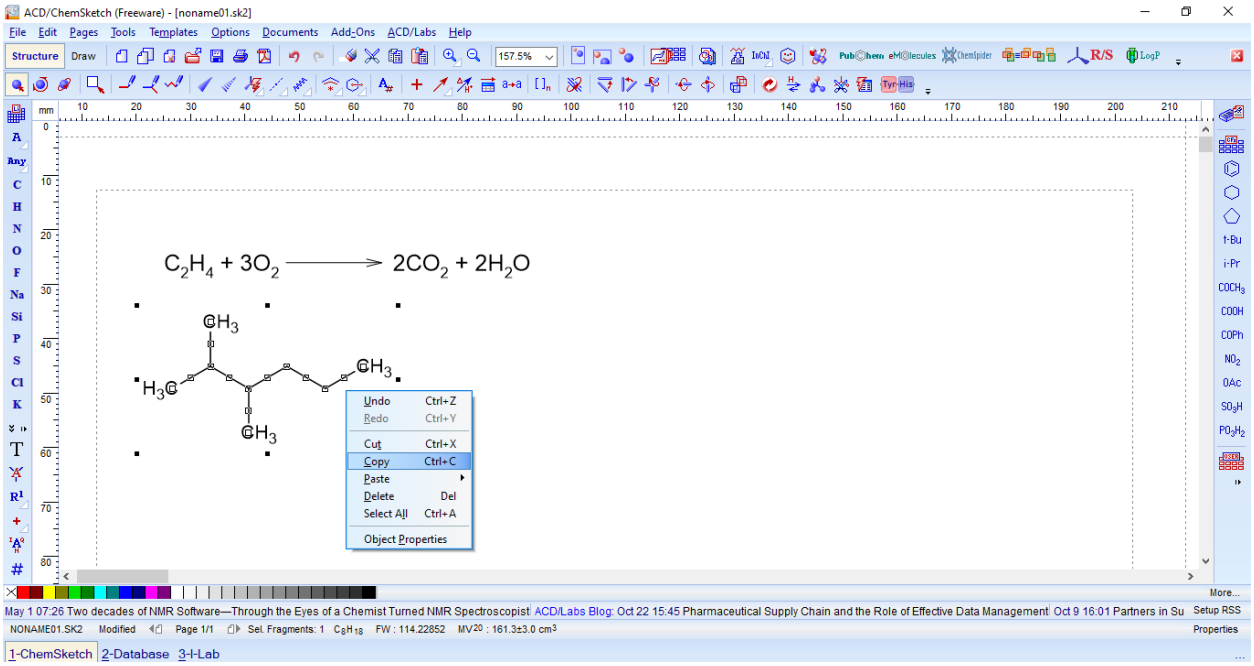


BAB XI. Memindahkan Gambar dari Lembar Kerja ChemSketch ke Power Point

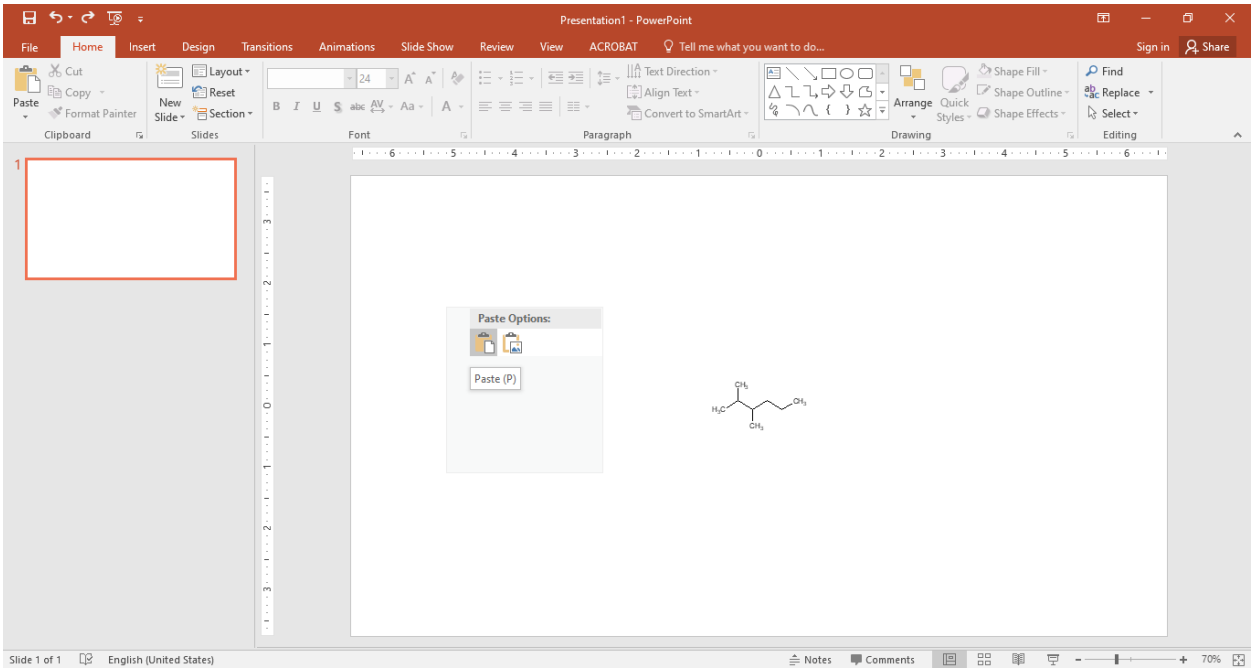
XI.1. Aktifkan senyawa yang akan dipindahkan



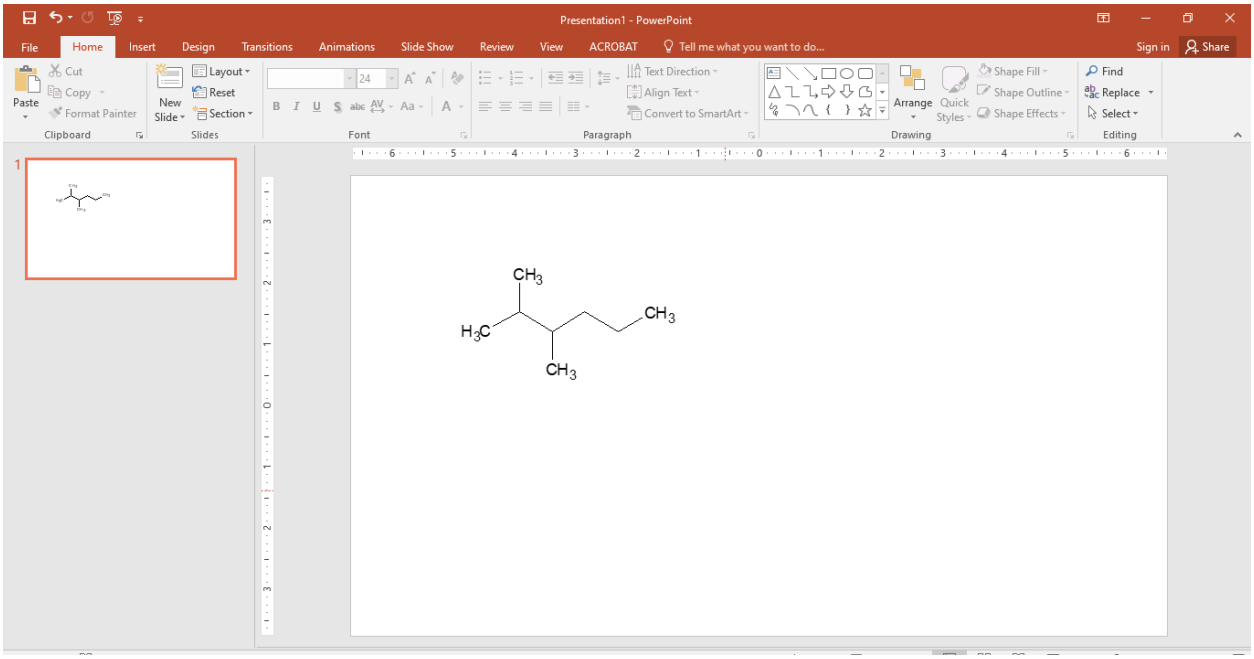
XI.2. Klik kanan → copy



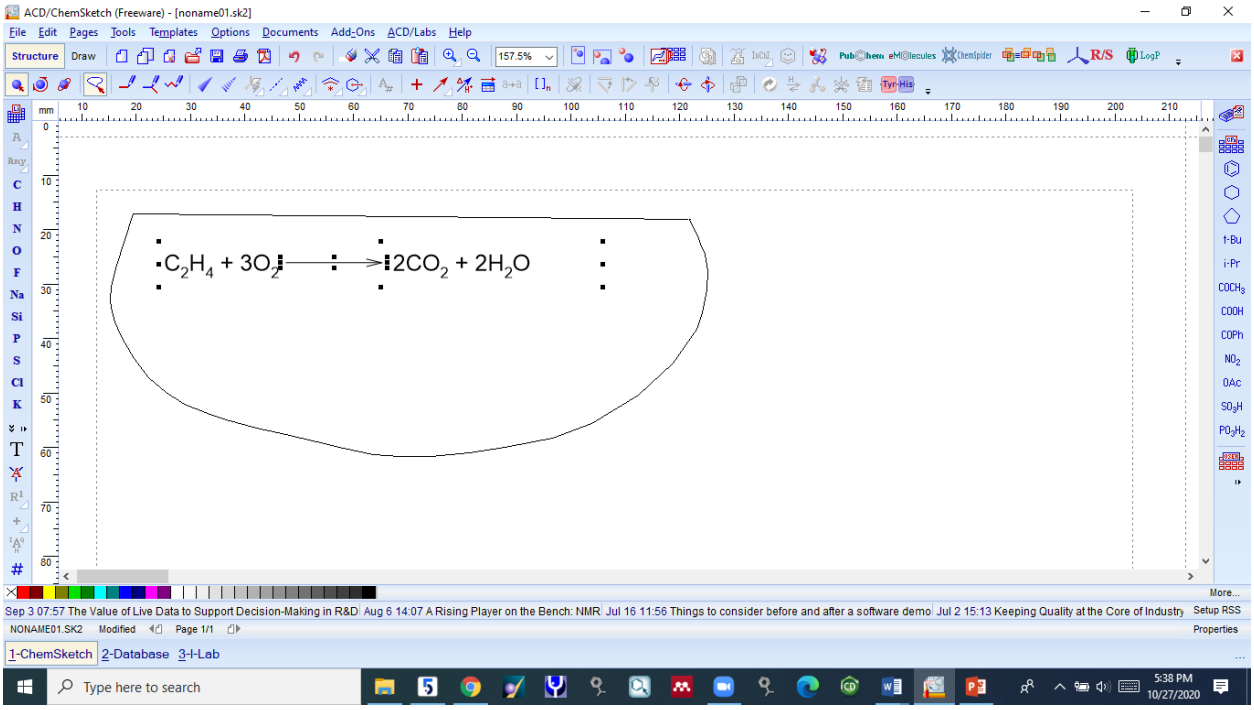
XI.3. Pindah ke lembar kerja power point, klik kanan → paste



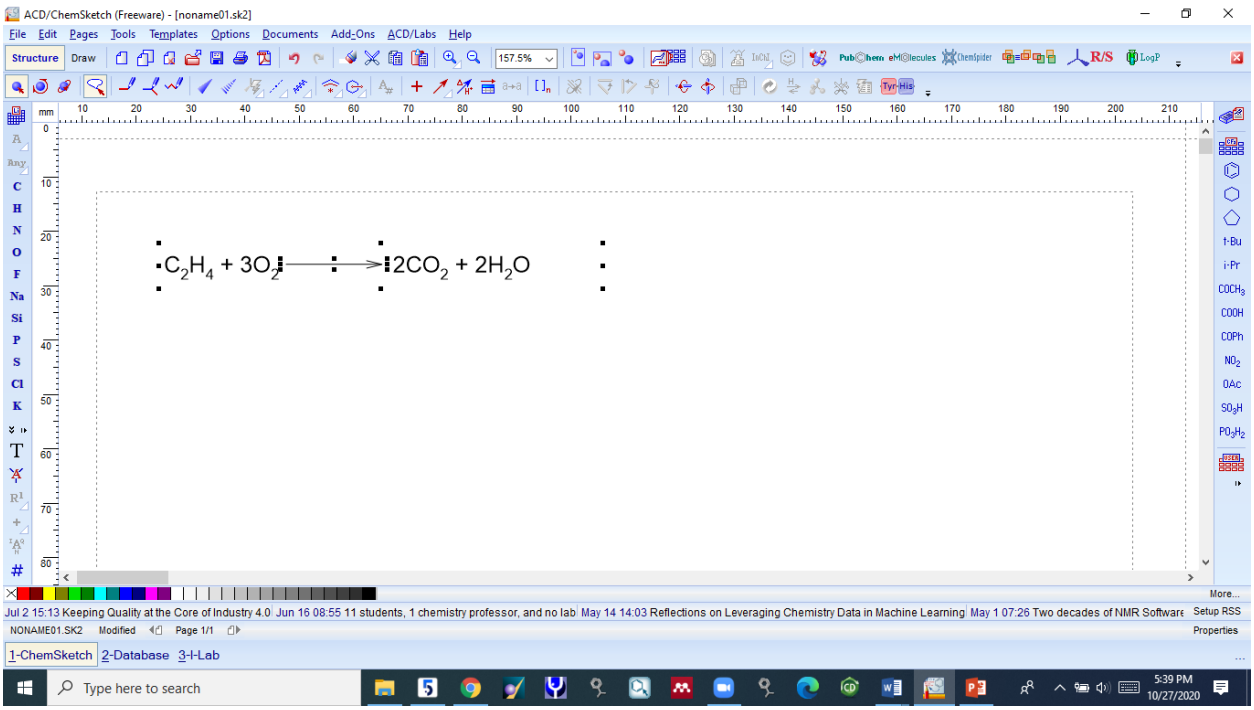
XI.4. Tampilan setelah di copy-paste



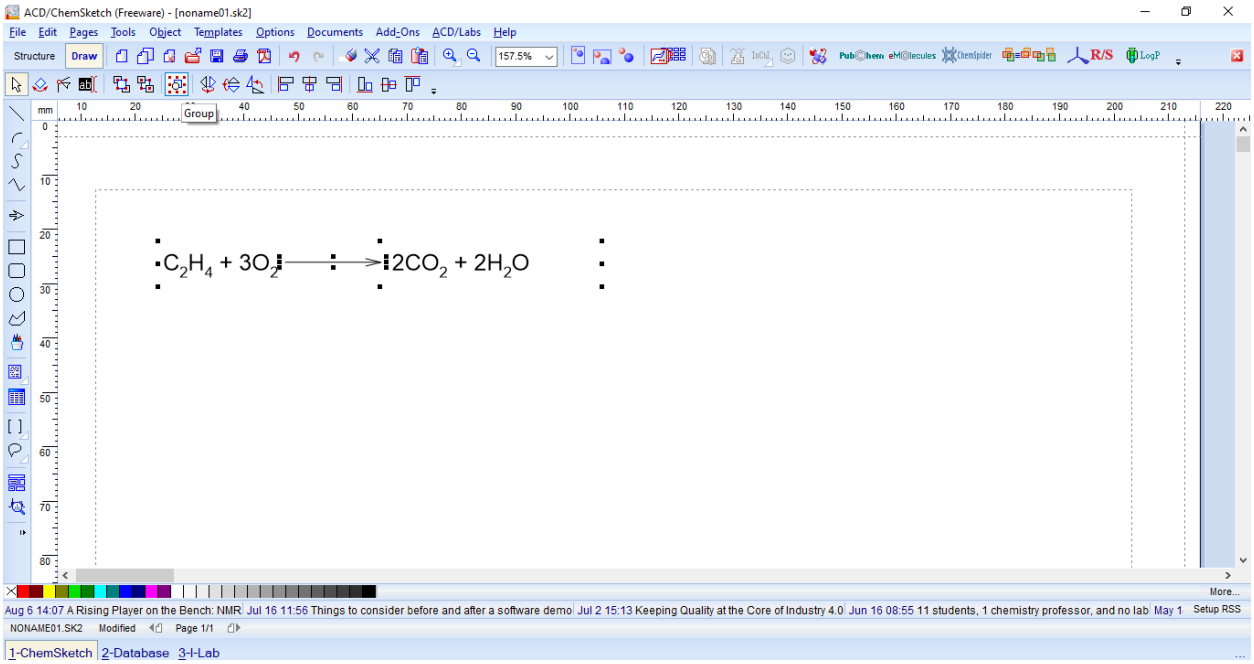
XI.5. Untuk copy paste persamaan reaksi, harus di grouping terlebih dahulu, dengan cara : aktifkan persamaan reaksi dengan Lasso



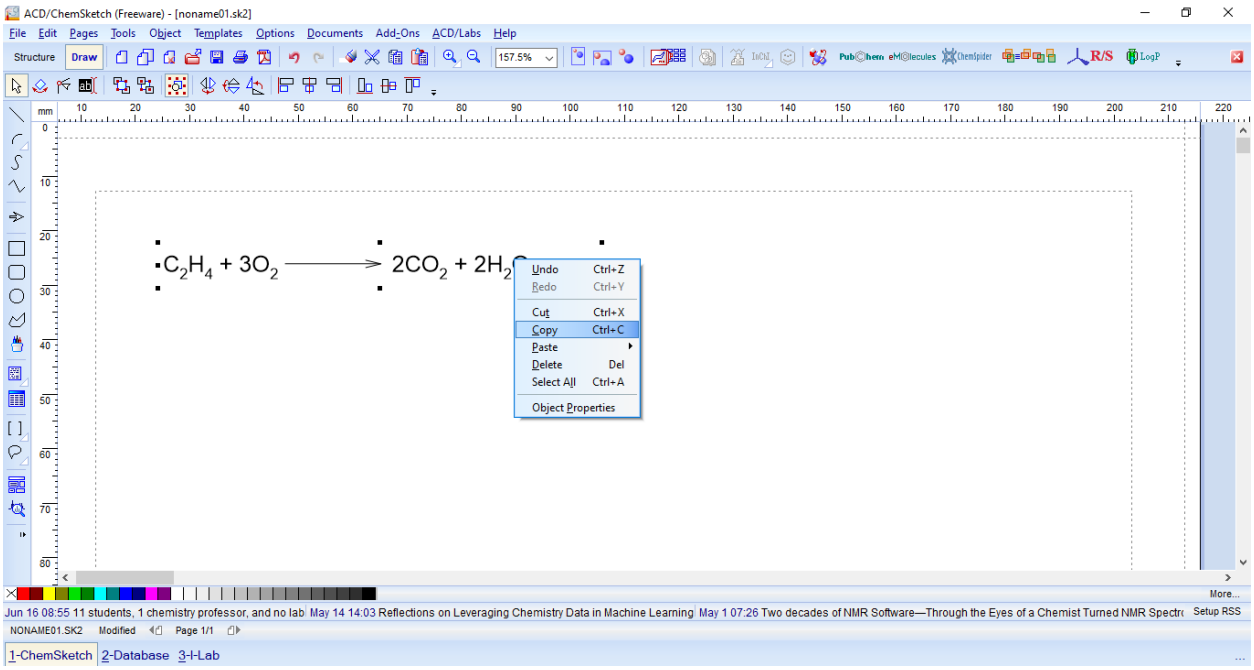
XI.6. Tampilan persamaan reaksi yang aktif



XI.7. Klik Group pada mode Draw



XI.8. Klik Kanan → Copy



XI.9. Klik kanan → Paste pada lembar power point