

1-Laboratoriya mashg'ulot:

Mavzu: Virtual laboratoriyalar bilan ishlash.

Ishning maqsadi: VirtualBox 6.0.0 dasturini o'rnatish hamda ishchi maydinni hosil qilib Windows XP, Windows 7 operatsion tizimini o'rnatish va sozlash, zamonaviy axborot texnologiyalarining o'quv – texnik vositalari kompyuter va ulardan foydalanish imkoniyatlari bilan tanishish.

Kutilayotgan natija: Talabalarda Windows operatsion tizimining turli versiyalarini o'rnatish, sozlash, axborot texnologiyalarining o'quv – texnik vositalari kompyuterning ichki, tashqi qurilmalari va ularning ishlash printsiplari bo'yicha ko'nikmalar hosil qilish.

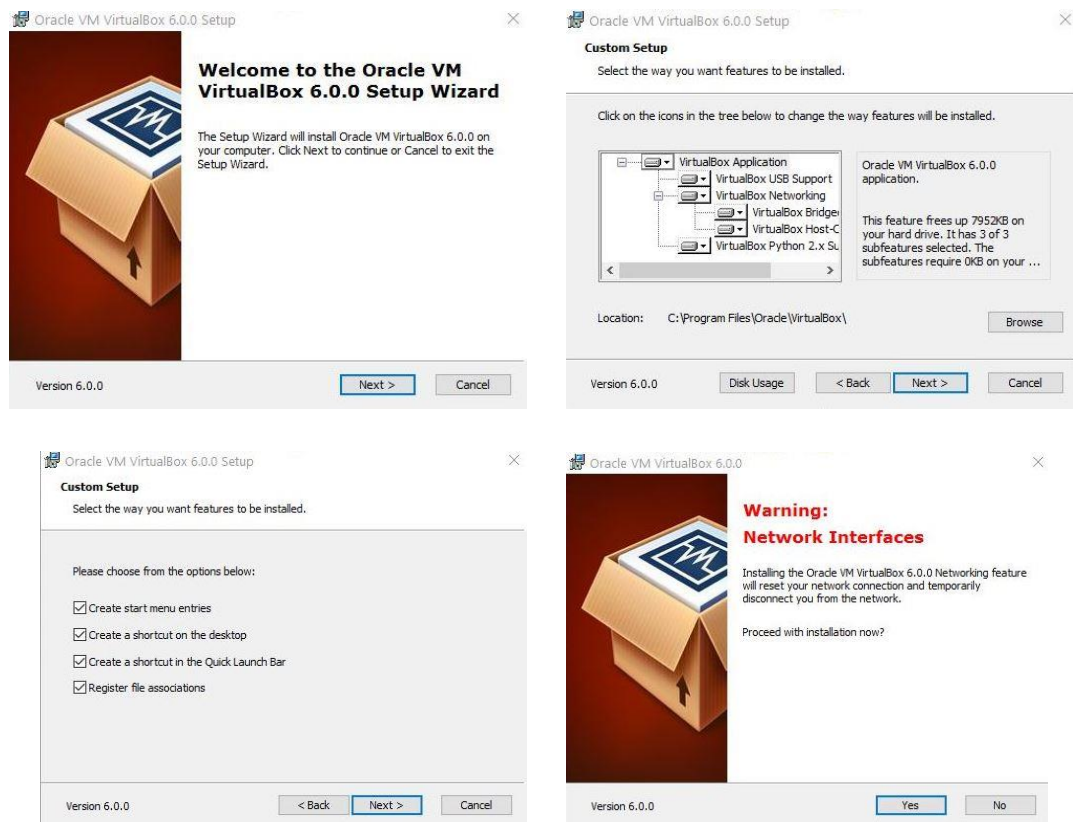
Laboratoriya jihozlari: Kompyuter, VirtualBox 6.0.0 versiyasi Windows operatsion tizimlari.

Nazariy ma'lumot.

Ishni boshlash uchun bizga **VirtualBox 6.0.0** dasturi kerak bo'ladi. Ushbu dasturni kompyuterga o'rnatib olamiz. Demak dasturni o'rnatish quyidagicha amalga oshiriladi.

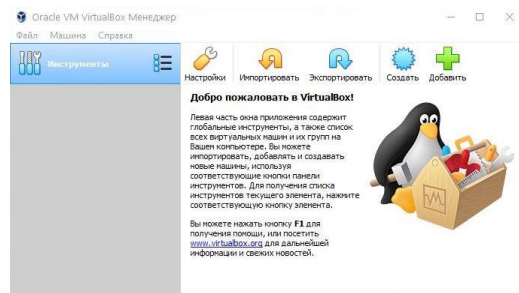
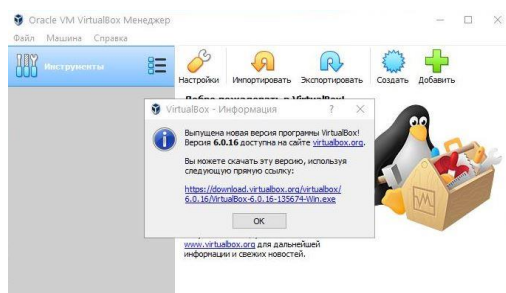
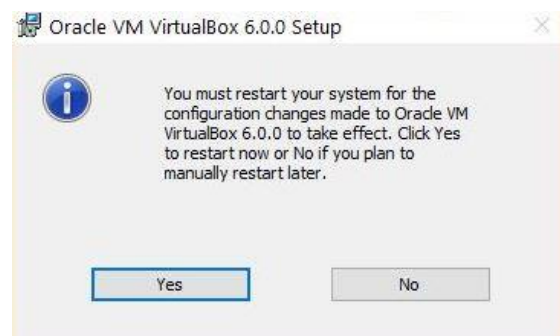
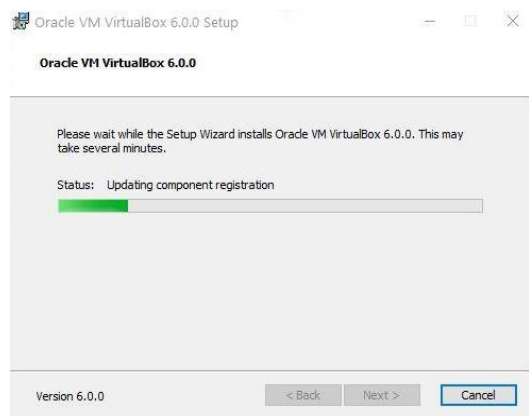
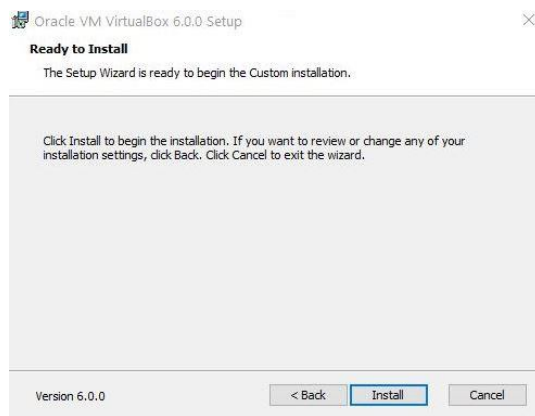
Dastur ustida sichqonchani chap tugmasini 2 marta bosib ishga tushirib olamiz. Natijada quyidagi oyna ochiladi.

Dasturning hamma sozlamalarini avtomatik holatda qoldirib **Next** tugmalarini ketma – ketlikda bosib so'ngra **Yes** tugmasini bosish orqali dasturni o'rnatish jarayoniga tayyorlab olamiz.



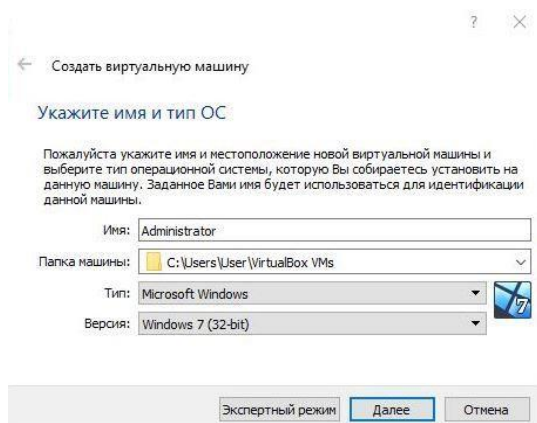
Dastur o'rnatilish jarayoniga tayyor holatga kelganidan so'ng **Install** va o'rnatilish tugagandan so'ng **Finish** va **Yes** tugmalarini bosib ishni yakunlaymiz. Natijada bizga dastur bilan ishlovchi muloqot oynasi paydo bo'ladi. Endi bu oynada virtual kompyuterlarni shakillantiramiz.

Virtual kompyuterlar bizga **Windows** va **Linux Ubuntu** operatsion tizimlarini tajriba maydonchasida o'rnatish uchun kerak bo'ladi. Amaliy mashg'ulot darsimizning mazmuni ham shundan iborat. Demak ishni quyidagi tartibda bajarishni boshlaymiz.

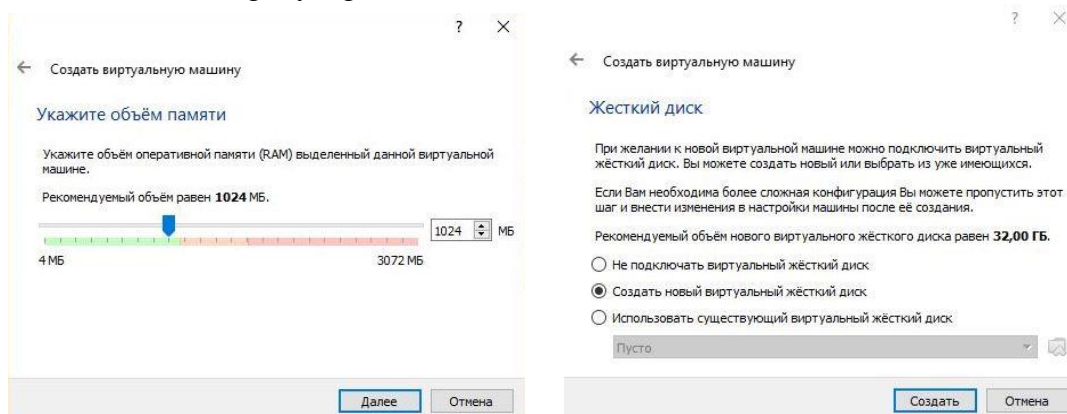


Bu oynada virtual kompyuterni nomini **Имя** bo'limiga, joylashinuv manzilini esa **Папка машины** bo'limiga ko'rsatamiz. Operatsion tizimning turini **Тип** bo'limiga, operatsion tizim razryadini **Версия** bo'limiga ko'rsatamiz. So'ngara **Далее** tugmasini bosib keyingi oyna sozlamalariga o'tamiz.

Keyingi oynadan kompyuterimizning operativ hotirasidan kelib chiqib **RAM** hotira hajmini belgilaymiz va **Далее** tugmasini bosamiz.



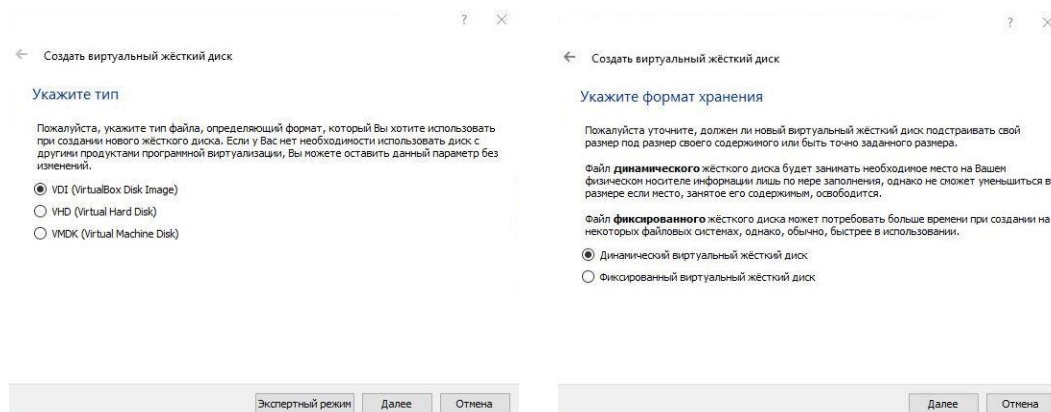
Navbatdagi oynadan esa virtual kompyuterimizga qattiq diskini hotira hajmini belgilaymiz va **Создать новый виртуальный жёсткий диск** parametrini tanlab **Создать** tugmasini bosib navbatdagi oynaga o'tamiz.



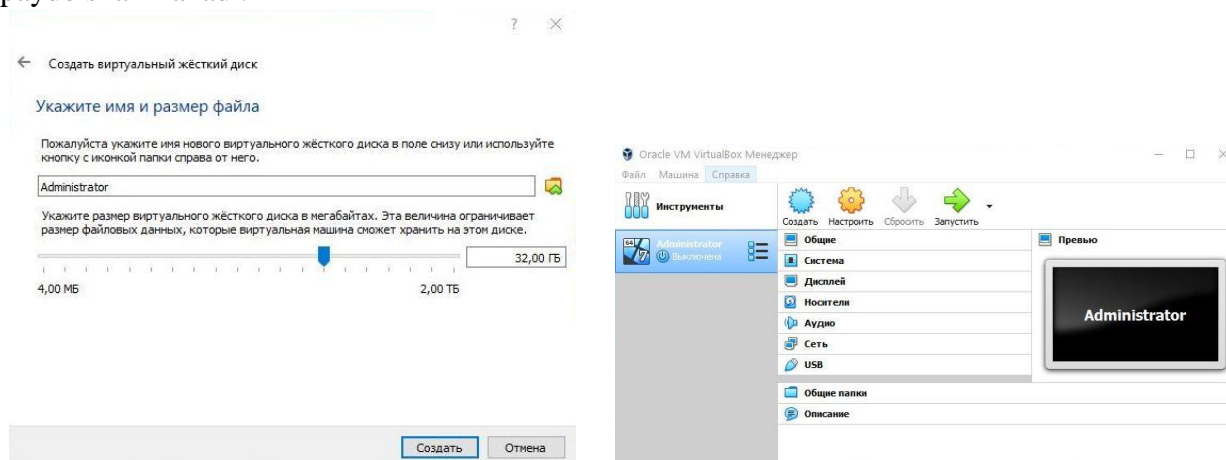
Bu oynadan esa **VDI** ya'ni (**VirtualBox Disk Image**) **Tun** bandini tanlab **Далее** tugmasini bosamiz.

Navbatdagi oynadan **Динамический виртуальный жёсткий диск** bo'limini tanlaymiz va **Далее** tugmasini bosamiz.

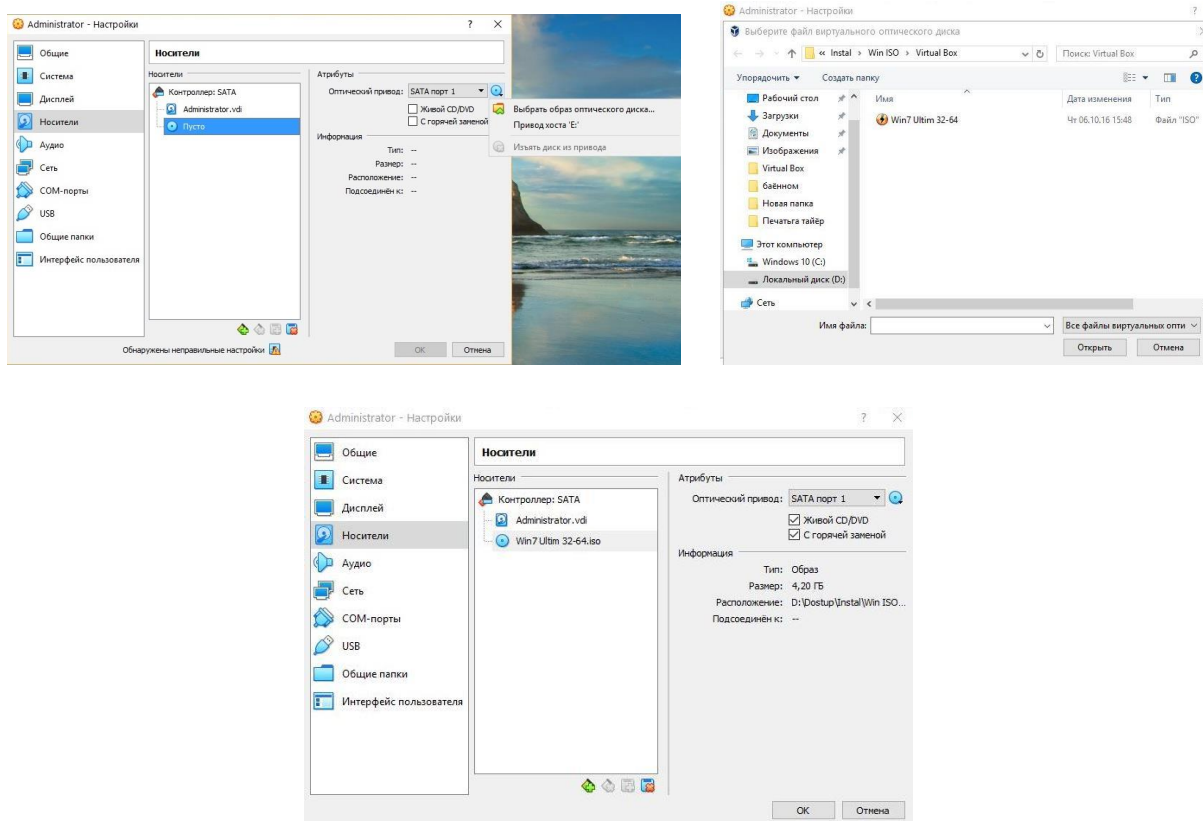
Bu bo'limni tanlashimizdan maqsad keyinchalik ish jarayonida bizga ma'lum bir hotira sig'imi kerak bo'lsa bemaolol kompyuterimizning qolgan bo'sh joyidan foydalanishimiz mumkin bo'ladi.



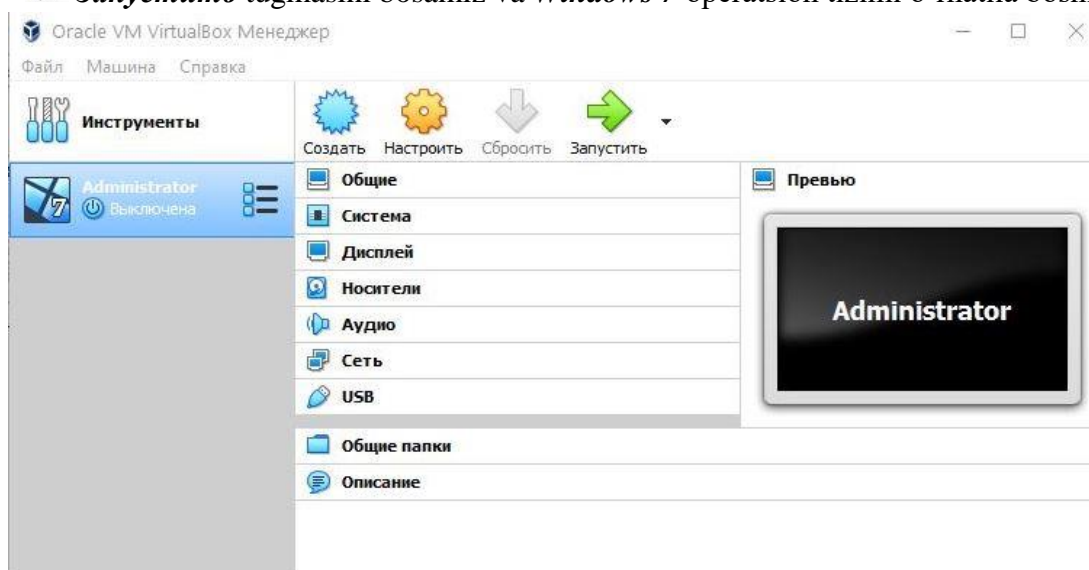
Quyidagi so'nggi oynadan qattiq diskimizning nomi va hotira hajmini belgilab **Создать** tugmasini bosib ishni yakunlaymiz. Natijada bizga virtual holatdagi kompyuterimiz ishchi oynasi paydo shakillanadi.

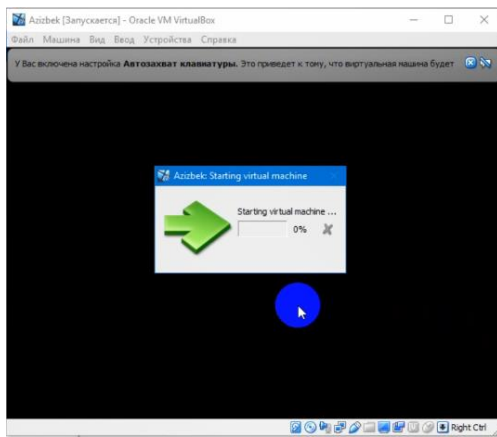


Endi **Windows 7** operatsion tizimini ushbu virtual kompyuterimiz hotirasiga o'rnatish tartibini ketma – ketligini ko'rib o'tamiz. Bunda **Настройка** bo'limidan **Носители** bandiga kirib u yerdan disk ko'rinishidagi virtual disk yurituvchi tanlanadi. Disk yurituvchi piktogrammasi yonida **Пусто** yozuvi mavjud. Bu degani hali disk yurituvchining ichiga disk solingani yo'q degani. Biz bu disk yurituvchini tanlaganimizdan so'ng oynaning o'ng qismida **Атрибуты** bo'limidan **Оптический привод SATA порт 1** qismiga **ISO** formatda yozilgan **Windows 7** obrazi manzilini ko'rsatib **Живой CD/DVD** va **С горячей заменой** yozuvlari oldiga ☒ ushbu belgini qo'yganimizdan so'ng **Ok** tugmasi aktiv holatga keladi va ushbu **Ok** tugmasini bosib tasdiqlaymiz.

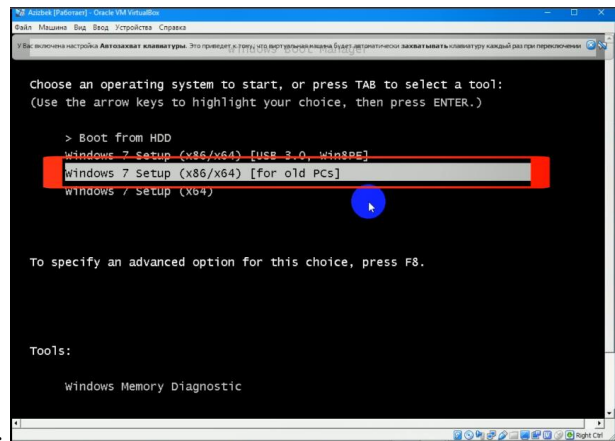


Mana virtual kompyuterimiz **Windows 7** operatsion tizimini yuklashga tayyor holatga keldi. Endi birgina **Запустить** tugmasini bosishimiz qoldi halos. **Запустить** tugmasini bosamiz va **Windows 7** operatsion tizimi o'rnatila boshlaydi.

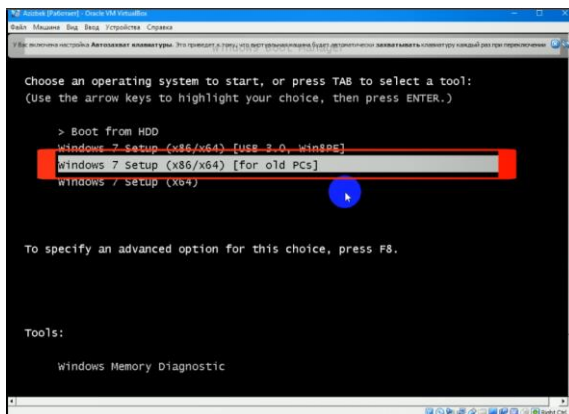




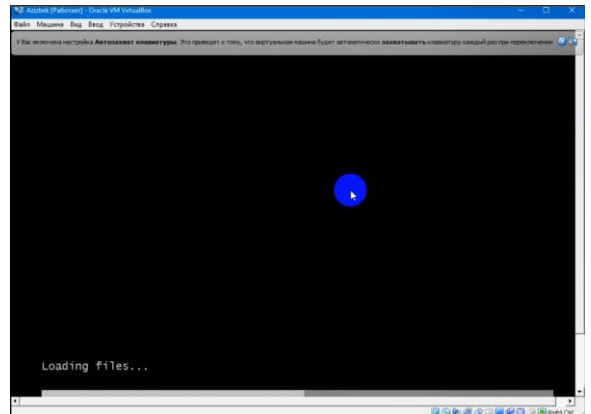
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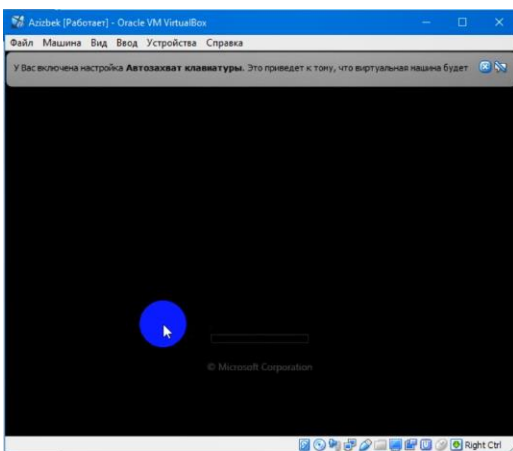
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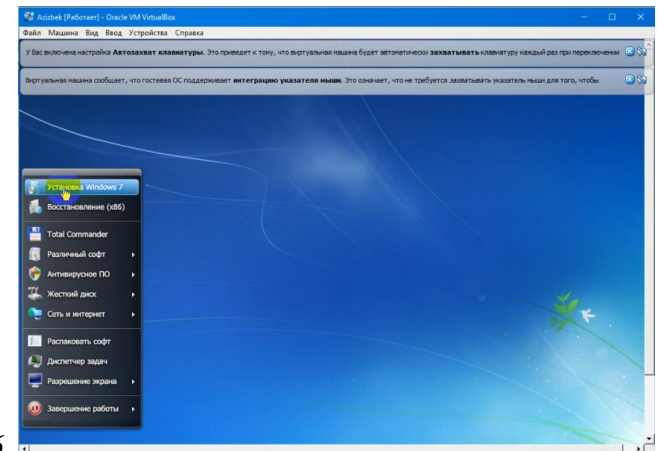
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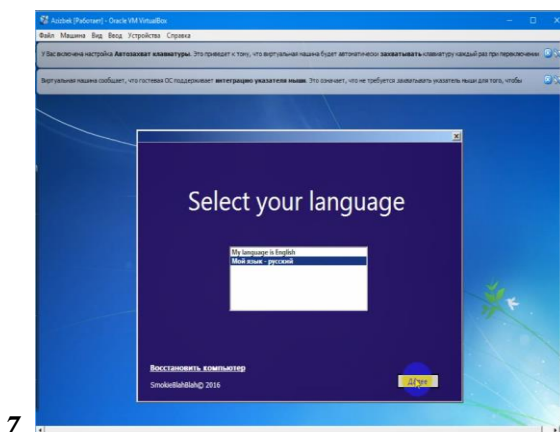
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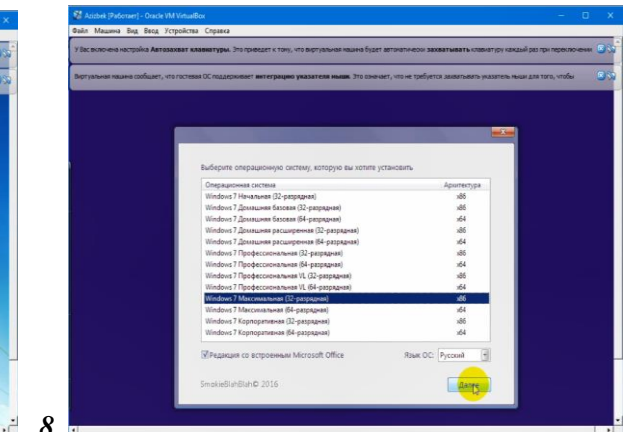
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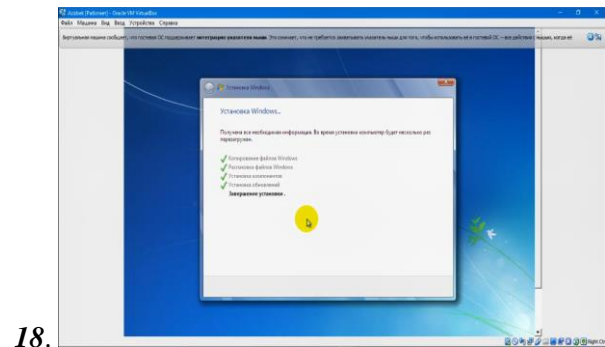
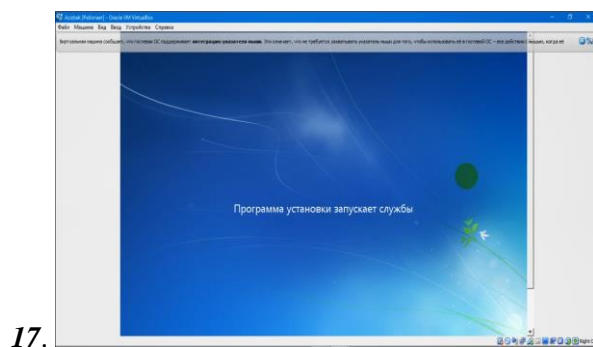
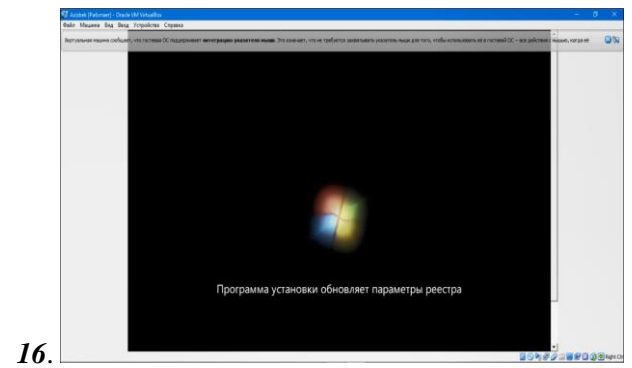
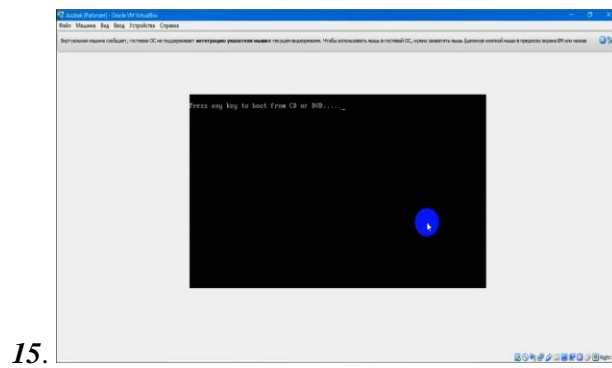
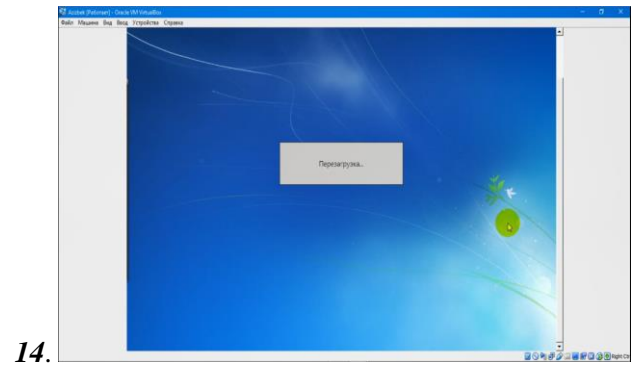
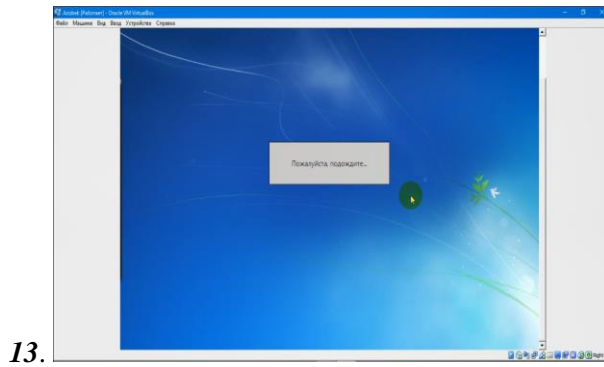
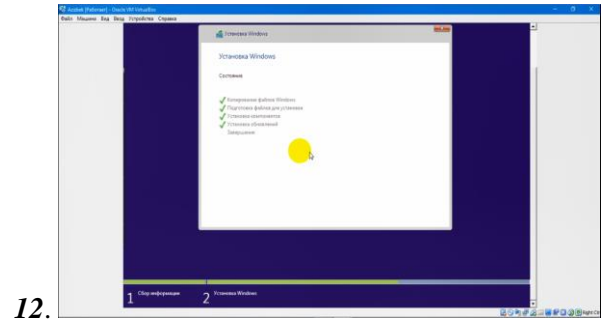
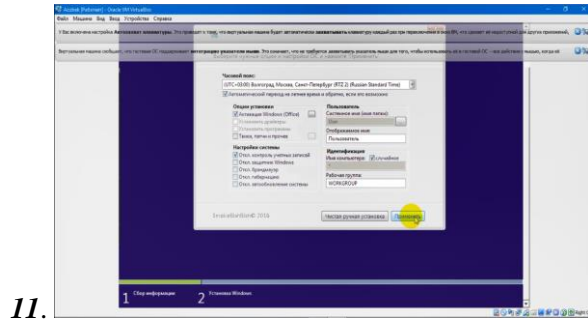
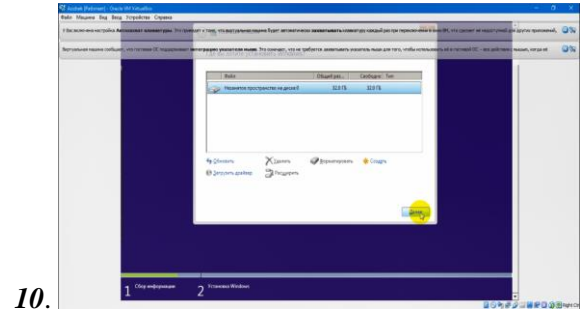
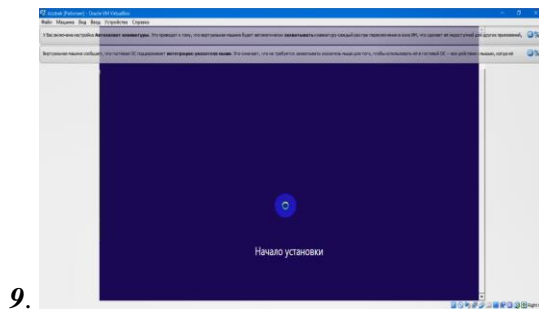


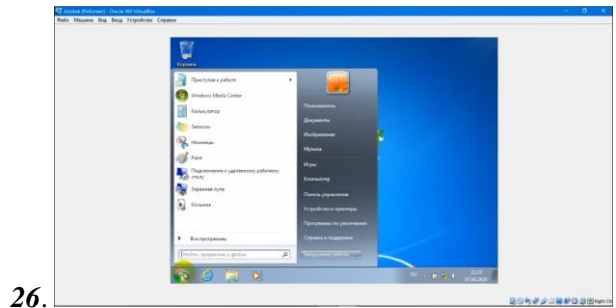
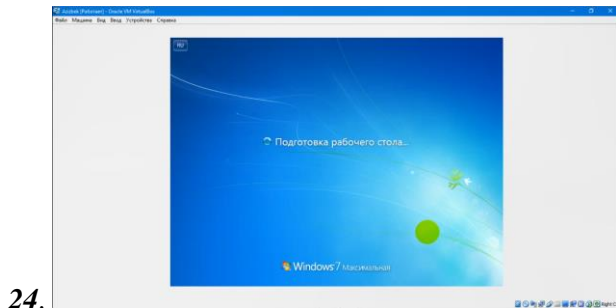
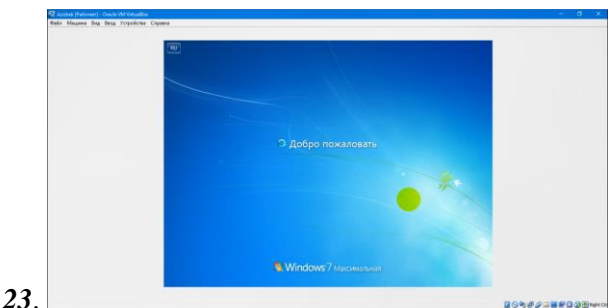
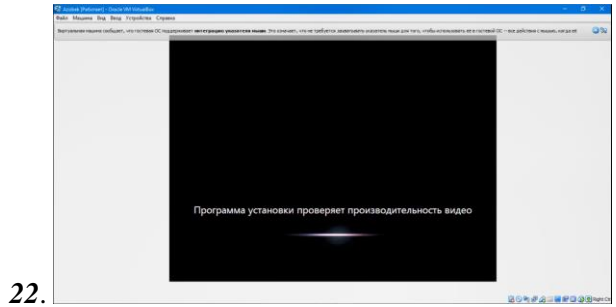
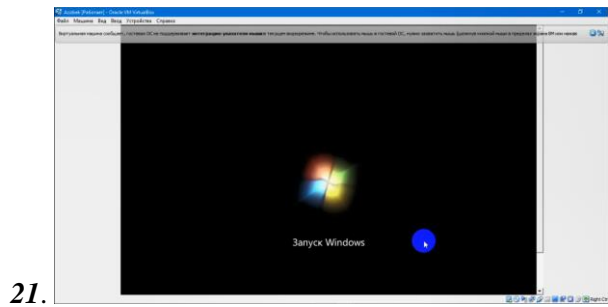
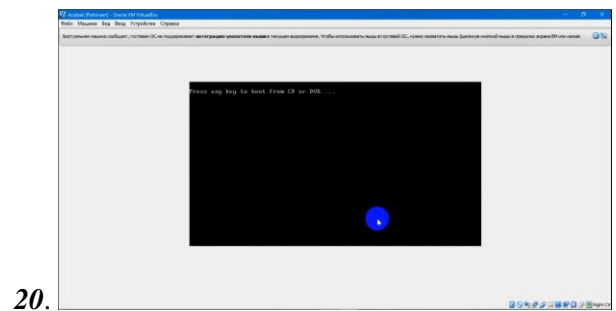
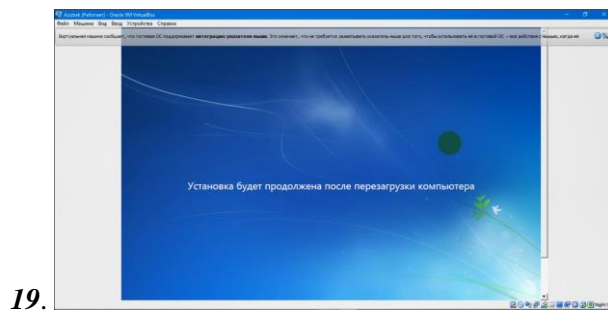
7.



8.







Windows 7 operations tizimini o'rnatish jarayoni tugadi.

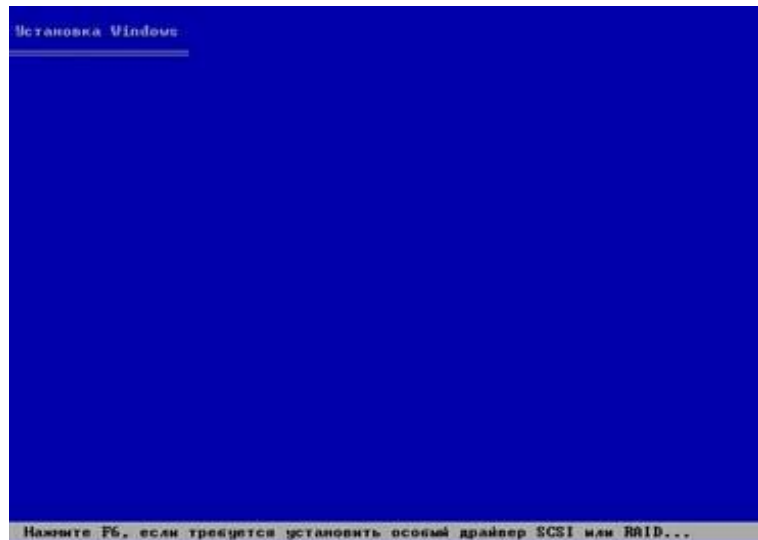
Mana endi **Windows XP** operations tizimini o'rnatishni ko'rib o'tamiz. **Windows XP** operations tizimini o'rnatishda master mavjud qurilamalarni avtomatik tarzda tekshiradi va mumkin konfliktlar xaqida habar beradi. **Windows XP** ni yuklovchi kompakt-disklar orqali o'rnatishda kompyuter **BIOS** **CD/DVD-ROM** orqali yuklashga ruhsat bergan bo'lishi kerak. Buni **BIOS** orqali sozlash mumkin. Zamonvay kompyuterlarda **CD/DVD-ROM** orqali yuklash sozlangan bo'ladi. Keling, **Windows XP** ni **CD/DVD-ROM** orqali o'rnatishni ko'rib chiqamiz:

1-Yuklovchi CD/DVD diskni **CD/DVD-ROM** ga qo'yamiz va kompyuterni qayta yuklaymiz. Agar **BIOS** da **CD/DVD-ROM** orqali yuklashga ruhsat berilgan bo'lsa kompyuter **CD/DVD** diskdagi sistema orqali yuklanadi. Bunda foydalanuvchiga **Windows** ni o'rnatuvchi master dan tashqari turli hil utilitalar, ya'ni qattiq disk bilan, **BIOS** bilan, parollar bilan ishlovchi utilitalar, antiviruslar, arxivatorlar, navigatorlar ni ishlatish mumkin. Taxminan quyidagi rasmda berilgan holatdagidek:

2-Windows ni o'rnatuvchi masterni yuklaymiz. Bunda kompyuterda dinamik yuklanish jarayoni sodir bo'ladi:



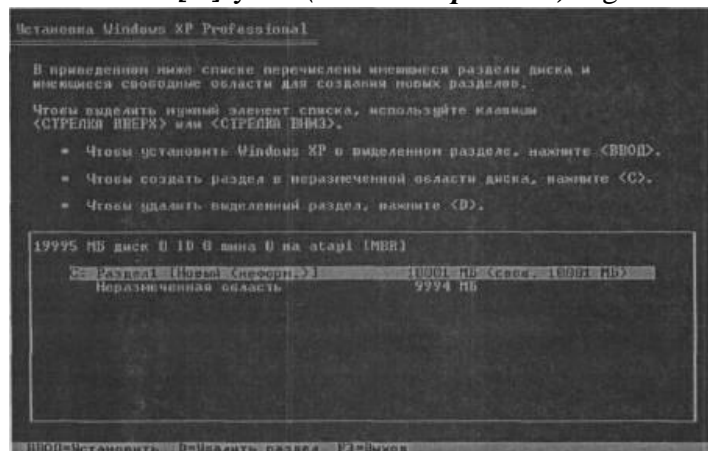
3-Shundan so`ng o`rnatishnign ilk bosqichlari boshlanadi. Bunda litsenziya kelishivi ekranda chiqadi, **F8** bosildi. Bazi disklarda litsenziya kelishuv qismi olib tashlangan bo`lishi ham mumkin:



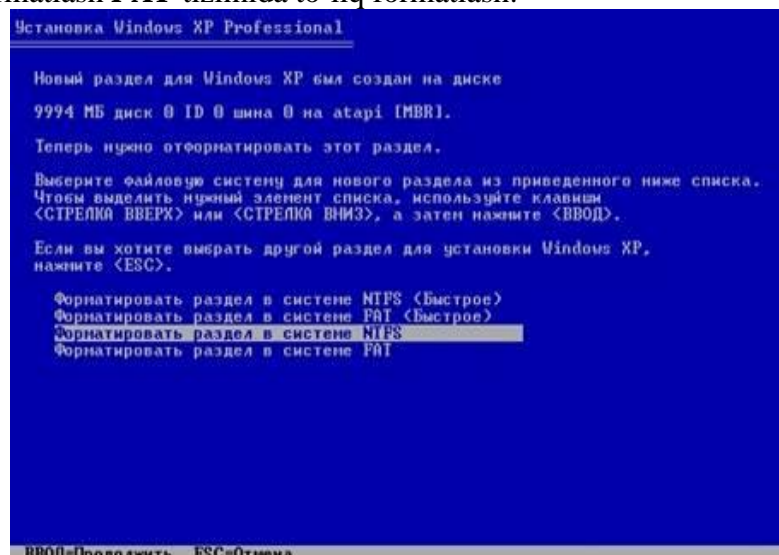
4-Quyidagi ishlarni bajarish mumkin: **Windows** ni o`rnatish uchun **[Enter]** Tiklash konsoli yordamida **Windows** ni tuzatish **[R]** O`rnatish dasturidan chiqish **[F3]**:



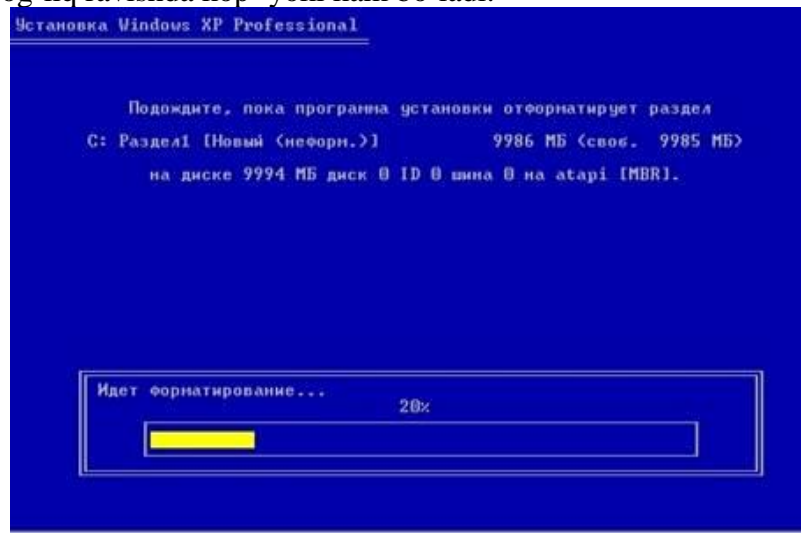
5-[Enter] ni bosib o`rnatishda davom etamiz: Bunda mavjud qattiq diskdagi bo`limlardan birini tanlash kerak. Bu bo`limga **Windows** OT o`rnatildi. Bo`limda albatta kamida **15 Gb** joy bo`lishi kerak. **Windows** ni tanlangan **разделъ** ga o`rnatish uchun [Enter] Yangi **разделъ** hosil qilish uchun klaviaturadan [C] ya`ni (**Создать разделъ**) tugmasini bosamiz. Tanlangan **разделъ** ni o`chirish uchun esa klaviaturadan [D] ya`ni (**Удалить разделъ**) tugmasi bosiladi:



6-[Enter] ni bosib o`rnatishda davom etamiz: Tanlangan **разделъ** ni formatlaymiz. Bunda quyidagi usullar taklif etiladi: **NTFS** tizimida tez formatlash **FAT** tizimida tez formatlash **NTFS** tizimida to`liq formatlash **FAT** tizimida to`liq formatlash:



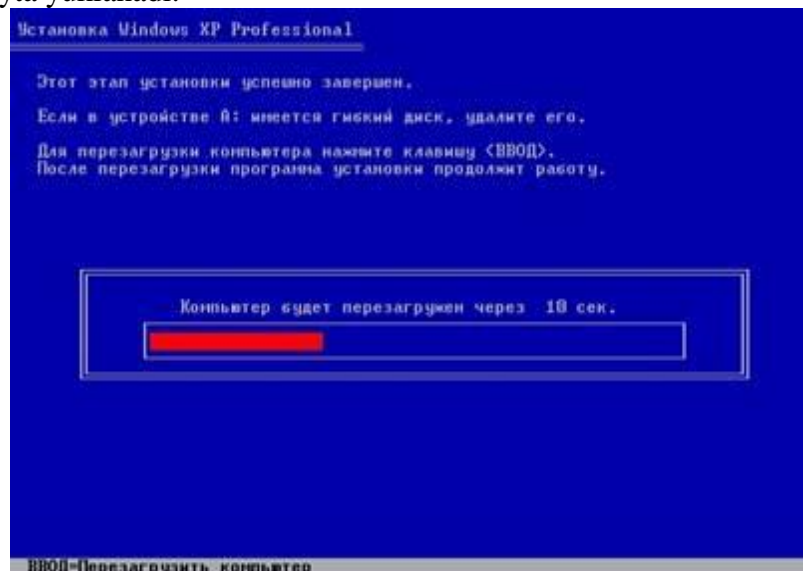
7-**NTFS** tizimida to`liq formatlashni tanlab davom etamiz: bunda formatlash vaqti tanlangan razdel xajmiga bog`liq ravishda kop` yoki kam bo`ladi.



8-Formatlash jarayoni tugaydi va masterni yuklash uchun zarur bo'lgan fayllar qattiq diskka ko'chiriladi:



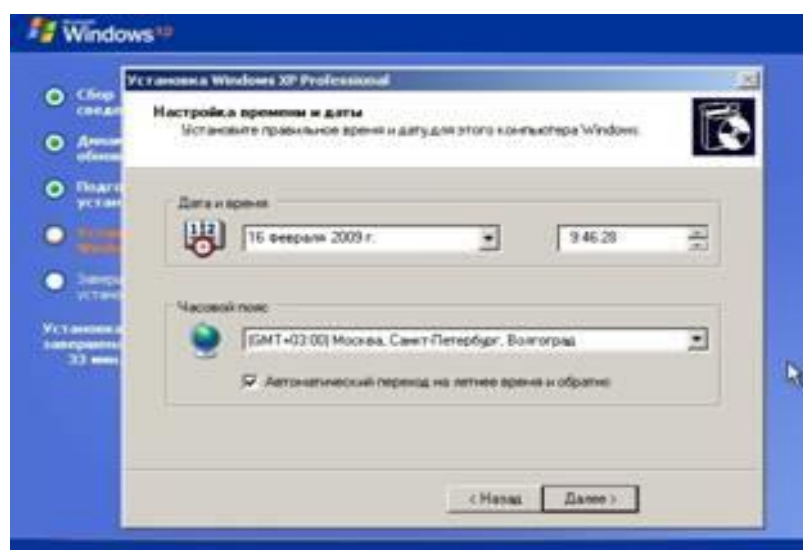
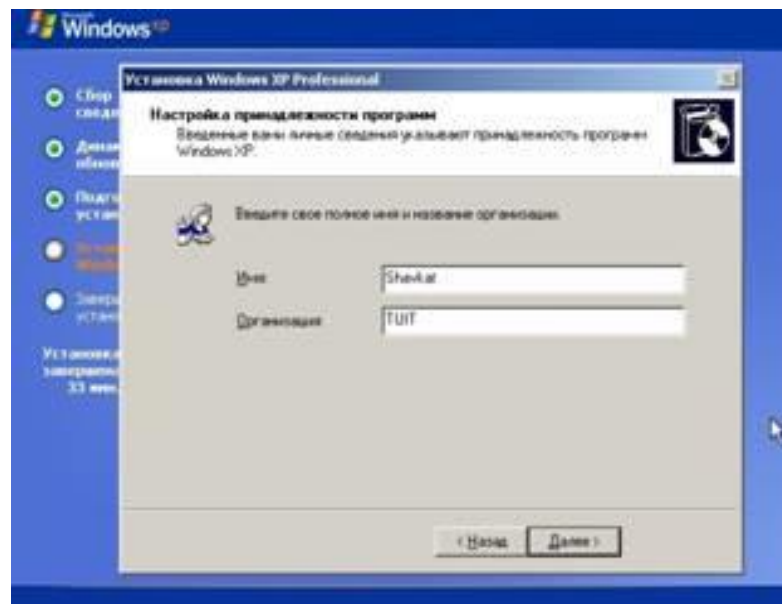
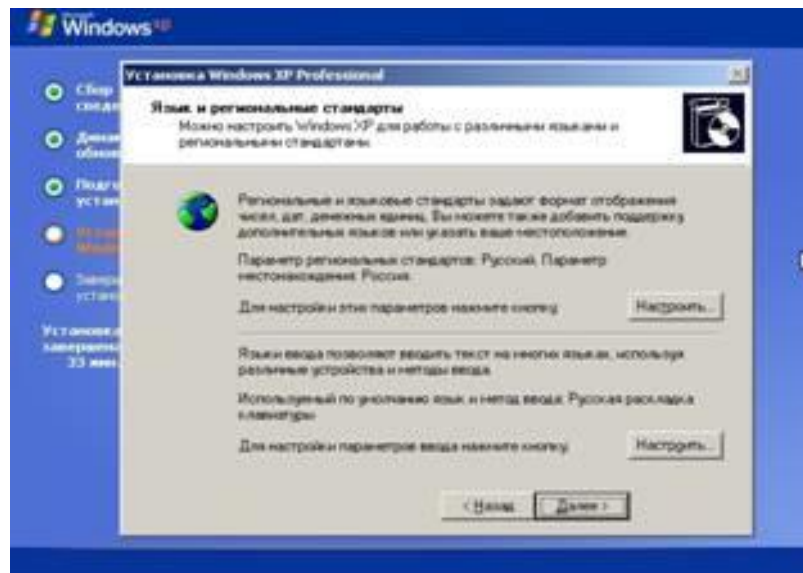
9-Kompyuter qayta yuklanadi:



Qayta yuklangandan so'ng o'rnatuvchi master ishga garafik rejimda tushadi:



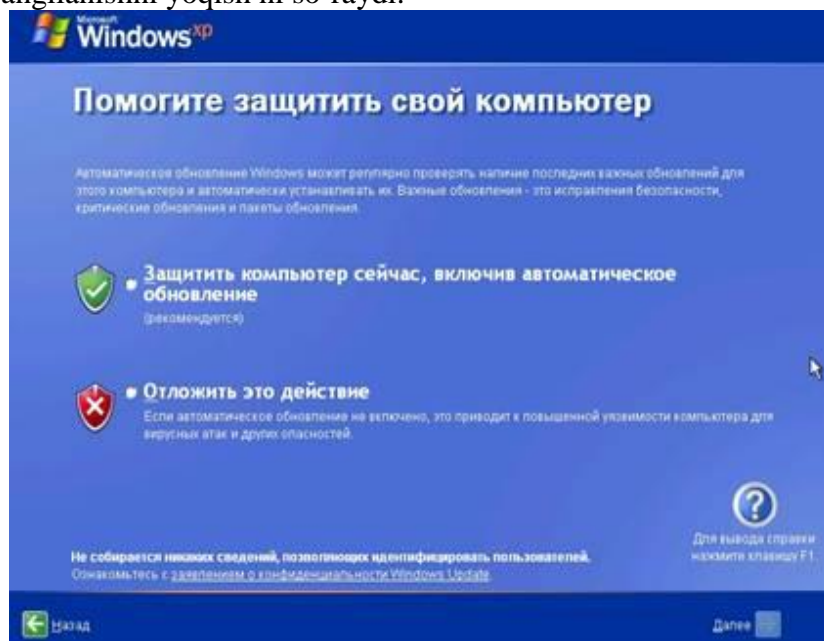
10-O'rnatish jarayonida master foydalanuvchidan kerakli sozlashlarni (hududiy parametrlarni, fodaluvchi va tashkilot nomini, vaqt va sanani, tarmoq parametlarini) kiritishni so'raydi:



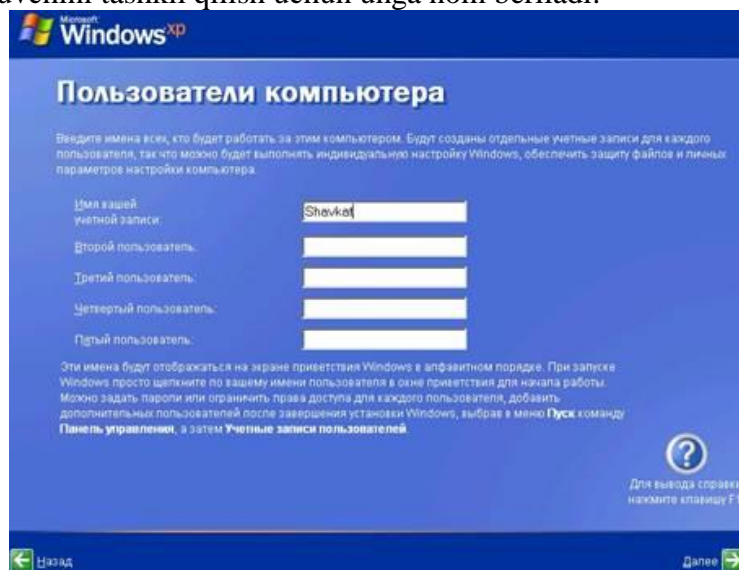
11-Master o`z ishni yakunlaydi va kompyuter qayta yuklanadi hamda birinchi bor **Windows** ishga tushadi *[Далее]* bosiladi:



12-Avtomatik yangilanishni yoqish ni so`raydi:



13-Yangi foydalanuvchini tashkil qilish uchun unga nom beriladi:



14-Va nihoyat foydalanuvchi ish stoli ishga tushadi:



Laboratoriya ishlarini o'tkazish qoidalari va xavfsizlik choralari.

Berilgan nazariy ma'lumot bilan tanishib chiqiladi va topshiriqlar variantlari ketma-ket bajariladi va natijalar olinadi.

Kompyuter xonasida xavfsizlik texnikasi qoidalari va sanitariya – gigiyena talablariga amal qilinadi.

Topshiriqlar variantlari (masala, misol, keyslar).

1. Windows XP operatsion tizimini VirtualBox dasturi orqali o'z kompyuteringizda o'rnatib rasm holatida taqdim eting va tushuntirib bering.
2. Windows 7 operatsion tizimini VirtualBox dasturi orqali o'z kompyuteringizda o'rnatib rasm holatida taqdim eting va tushuntirib bering.

Nazorat savollari.

1. Windows XP, 7 operatsion tizimlarining bir – biridan farqi qanday?
2. Windows operatsion tizimining asoschisi kim?
3. Windows operatsion tizimini kompyuterning hotirasiga yozish uchun qaysi axborot tashuvchi qurilmalardan foydalaniladi?
4. Qanday operatsion tizim turlarini bilasiz?
5. Operatsion tizimni o'rnatishda operativ hotiraning ro'li nimadan iborat?
6. Mikroprotsessorning vazifasi nimalardan iborat?
7. Monitoring vazifasi nimalardan iborat?

2-Laboratoriya mashg'ulot:

Servis (xizmat ko'rsatuvchi) dasturlar – utilitlar bilan ishlash. Disklarni formatlash, defragmentatsiya qilish.

CCleaner dasturi imkoniyatlari:

Windowsning C diski ichidan temp papkasidan temp fayllarni o'chirib tashlash yoki CCleaner dasturi orqali keraksiz fayllardan tizimni tozalash mumkin. Agarda C diskidan temp papkasini topa olmasangiz u yashirin holatda turgan bo'lishi ham mumkin. Shu sababli Ccleaner dasturidan ossongina qoldiq fayllardan kompyuterdan tozalash mumkin.

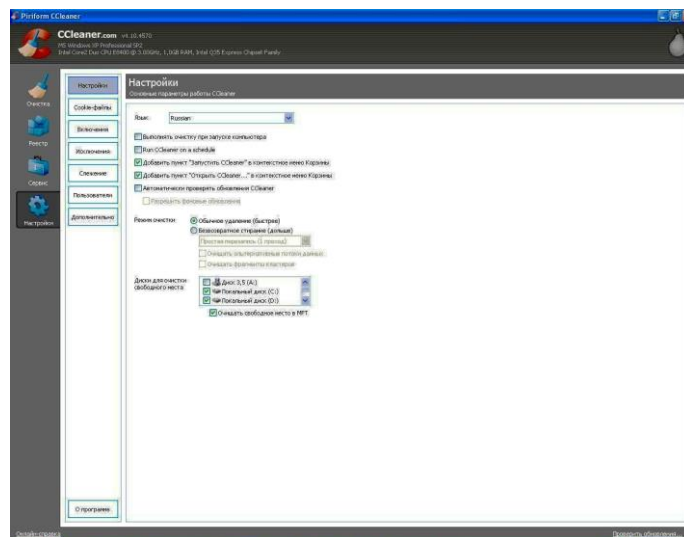
Masalan: CCleaner dasturi ishga tushgach "Настройки" bo'limidan C va D disklar belgilanib "Очистка" bo'limiga o'tib "Анализ" so'ngra "Очистка" buyruqlari bosiladi.

Bundan song "Реестр" bo'limiga o'tiladi va bu yerdan ham "Поиск проблем" va "Исправить проблемы" buyruqlari bosiladi.

Agar har ikkala bolimda birinchi marta tozalananda so'ng to'liq tozalanmay qoldiq fayllar qolsa u holda yana 2 – 3 marotaba tozalashga berish mumkin.

Keyingi tozalash ishlari ham xuddi yuqoridagidek amalgam oshiriladi.

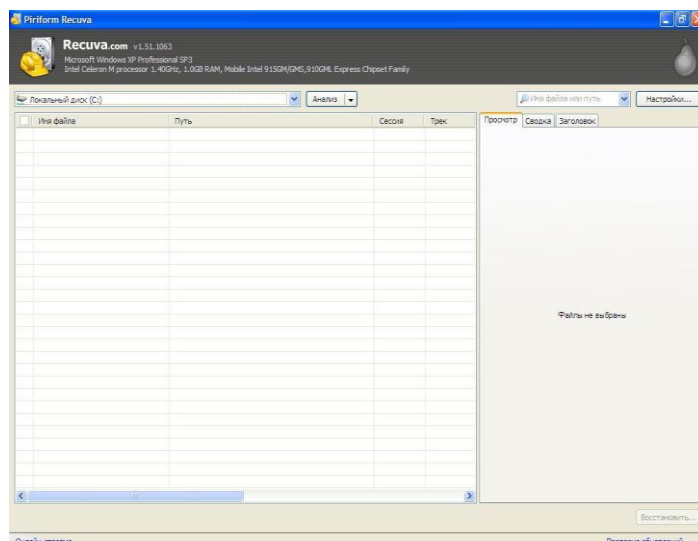
CCleaner dasturining ham versiyalari dasturchilar tomonidan juda ko'p ishlab chiqarilgan. Siz eng so'nggi versiyalaridan foydalanishga harakat qiling. Buning ahamiyati juda katta bo'ladi.



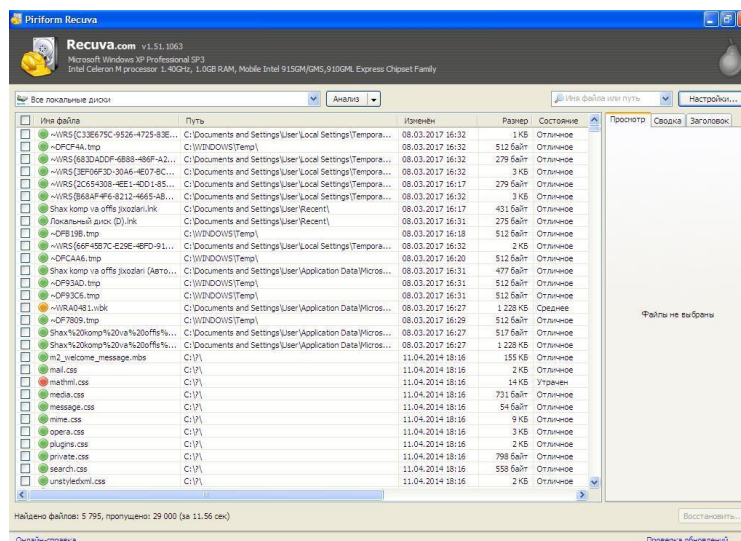
Qattiq diskdagi ma'lumotlarni tiklash uchun xizmat qiluvchi Recuva dasturi:

Qattiq diskdagi ma'lumotlarni tiklash dasturiy vositalari juda xilma-xildir. Masalan: Recuva, Recover my fayls, Handy Recovery va boshqalar.

Recuva dasturi ustida sichqonchani chap tugmasini ikki marotaba bosish orqali dasturni ishga tushirib olamiz. Natijada quyidagi oyna xosil bo'ladi.



Bu oyna ichidan shaxsiy kompyuterimiz xotirasidan ya'ni vinchestordan o'chib ketgan fayllarni jumladan: audio, video, foto, offis xujjatlarini tiklashimiz mumkin. Ishchi oynaning ichidan o'chib ketgan faylimiz qaysi diskda ekanligini tanlab ko'rsatamiz C disk, D disk yoki bo'lmasam "Все локальный диск" va ushbu bo'limning o'ng tomonidagi "Анализ" tugmasini bosamiz. Qidirib topilgan fayllar ishchi oynamizda fayllar nomi va manzillari bilan ko'rsatiladi. Shuni ham eslatib o'tish kerakki C diskdan tiklangan fayllarni D diskka va aksincha D diskdan tiklangan fayllarni C diskka saqlash tavsiya etiladi. Xamma fayllar qidirib topilganidan so'ng "Имя файлы" yozuvi yonidagi katakcha belgilanadi natijada xamma fayllar avtomatik tarzda "Галочка" belgisi bilan belgilanadi. Agarda qidirib topilgan fayllar ichidan ayrimlari kerak bo'lsa o'sha fayl yozuvi yonidagi katakchalarga aloxida aloxida "Галочка" belgisi qo'yilib chiqib ishchi oynaning o'ng quyi qismida "Восстановить" tugmasi bosib saqlash manzili ko'rsatilib saqlash davom ettiriladi. Tiklanayotgan fayllar quyidagi rasmda tasvirlangan.



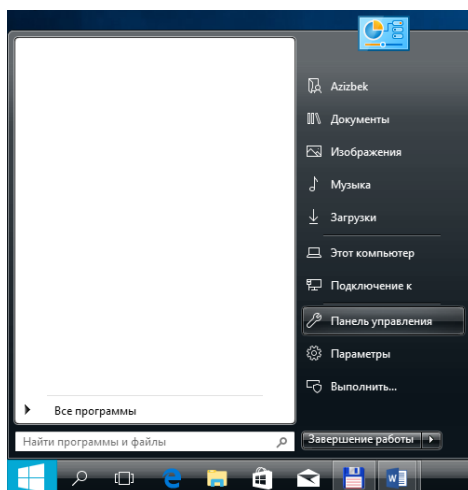
Ayrim xollarda fayllar obrazi tiklanadi lekin tiklangan fayl buzilgan ya'ni "Поврежден" bo'lishi mumkin. Ishchi oynada ko'rinib turganiday tiklangan fayllar quyidagi ustunlarga ajratib korsatilgan:

- 1- Имя файла (faylning nomi);
- 2- Путь (Manzili);
- 3- Изменён (Sanasi va sog'oti);
- 4- Размер (Xajm o'lchov birligi bayt, kilobayt, megobayt);
- 5- Состояние (Xolati yaxshi, o'rta yaxshi, qoniqarsiz);

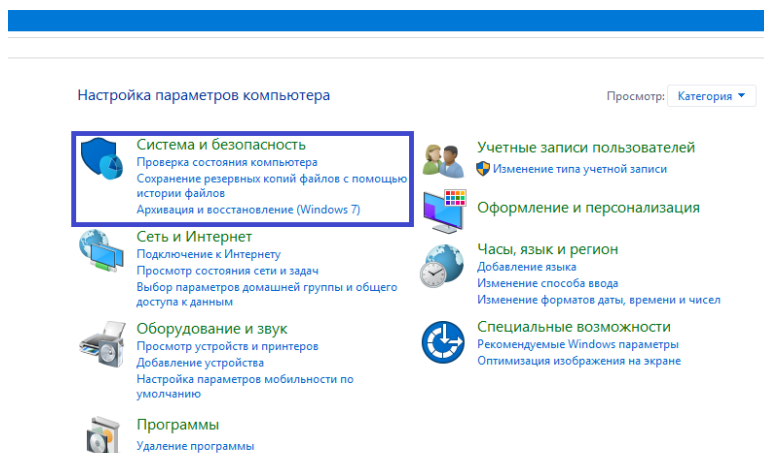
Компьютер дисklarni Defragmentasiya qilish:

Defragmentasiya qilish rasmlar orqali ko'rsatib o'tiladi.

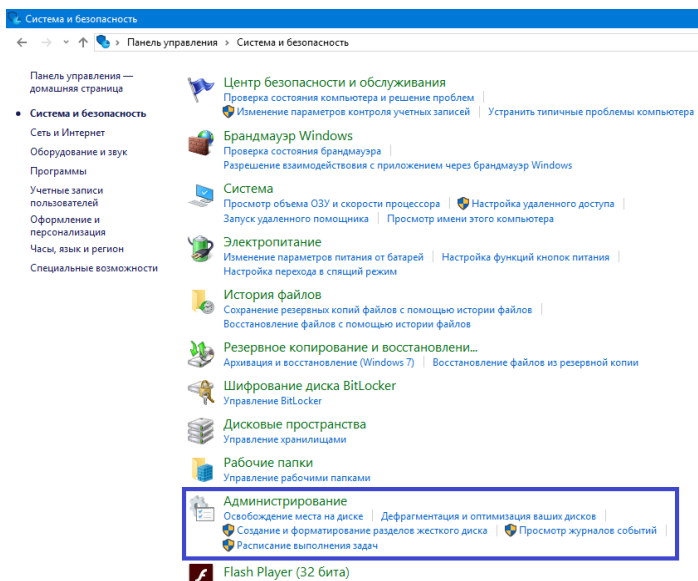
Пуск менюси ochiladi va bu yrdan Панель управления bandi tanlanib ishga tushirib olinadi. Quyidagi rasmda Панель управления bo'limiga kirish keltirilgan.



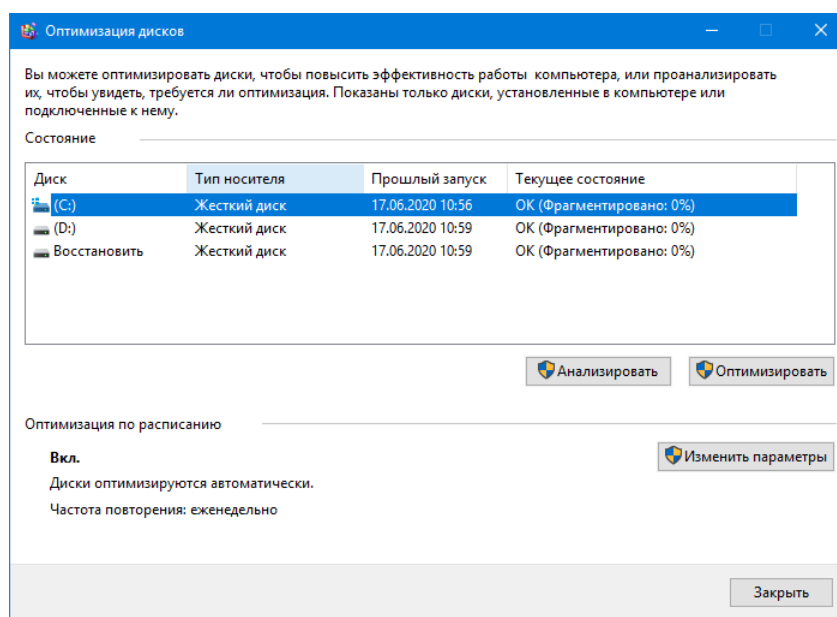
Keyingi rasmda xoshiya bilan chegaralangan bo'limdan Система и безопасность bandni tanlaymiz.



Navbatdagi ochilgan oynadan ya'ni Администрирование bo'limidan Дефрагментация и оптимизация ваших дисков bandi tanlanadi.



Xosil bo'lgan oynadan esa kerakli disklar tanlanib (C yoki D) Анализировать va yoki Оптимизировать buyruqlari orqali disklnrni Фрагментация qilishimiz (tekshirishimiz) mumkin.



Your Uninstaller PRO dasturi:

Agar kompyuterning ishlashiga og'irlik qiladigan dasturlar o'rnatilgan bo'lsa u xolda kompyuterga qo'shimcha dasturiy vositani o'rnatib olish kerak bo'ladi.

Masalan: **Your Uninstaller PRO** dasturiy vositasidan foydalaniladi.

Ushbu dasturiy vositani Belof, Windows Chip XP 2014 Final disklaridan yoki bo'lmasam internet tarmog'i orqali ma'lum saytlardan megasoft.uz saytidan ham yuklab olish mumkin.

Bu dasturning afzalligi shundaki Your Uninstaller PRO dasturiy vositasidan o'chirilgan dasturlarning qoldiq fayllarini ham operatsion tizimning reestoridan o'chirish imkonini beradi.

